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On Channel

Last issue I asked for any "do it yourself" projects which you might have hanging around. I did receive couple, and they are being looked at for next issue.

One gentleman got all het up about CBers building their own gear and went on at some length to explain that it was illegal, because everything has to have DOC approval. For crying out loud, I don't suggest you build your own rig — just an antenna, power supply, electric chair — you know, just simple stuff.

★ ★ ★

I don't know what we have done to upset CREST — haven't heard a dicky bird from them for yonks. C'mon fellas, let's be friends. The least you could do is list your addresses in the Club Register — I can't find your telephone listing in the 'phone book, and I don't know where to direct enquiries.

★ ★ ★

The gremlins got into the wordmaze again — two number 8 clues, but once again you geniuses (or should that be genii?) out there had no trouble. But, just once, I'd like to get it right . . .

★ ★ ★

You will notice that the rig tests don't include any bench test figures — they are more your "user" report. That's because our tacit testing tech extraordinaire is in hospital. Keep your chin up Ken, we need you!!

Consequently, if you are looking for the test on the Royce TS133 promised in our last issue, you will have to wait.

★ ★ ★

Which brings us to more mundane things, like new equipment and prices. Ye gods! There is a plethora of new equipment available, but the prices will knock you right out of your little cotton socks. The equipment is first class, but the money you have to part with has almost taken CB out of the "hobby" category and put it into the "snobby" bracket. Get into your local dealer fast, before the latest price rise takes effect on new shipments.

★ ★ ★

We are still looking for someone to write some words each issue on the 27 MHz scene, to balance out the UHF News — John Cameron has 'sorfed' to Canada to hunt polar bear. If you are interested in 27 megs and can string a couple of words together on operating conditions, DX news, new accessories, or whatever, drop me a line c/o GPO Box 628E Melbourne 3001, or phone on (03) 605 4203.

★ ★ ★

And last, but not least, our old friend Fred. I've said some cruel things about his nibs in the past, but sometimes he really does know what he is talking about.

You see, I have this computer which I use for creating this publication — amongst other things, and before I toddled off to Thailand for a well earned rest, I put a gang of stuff onto disk, but didn't bother to make a hard copy. When I came back, the beast of a thing had decided to expectorate the pacifier (spit the dummy), and it looked as though it would have to go back to the manufacturer in Singapore — again. None of the techs I took it to could find the problem. Fred said "Why don't you give it a good kick in the guts?" (commonly known as "percussive maintenance"). Out of pure frustration, I followed his advice — and it worked! Maybe I've been wrong about him all these years.

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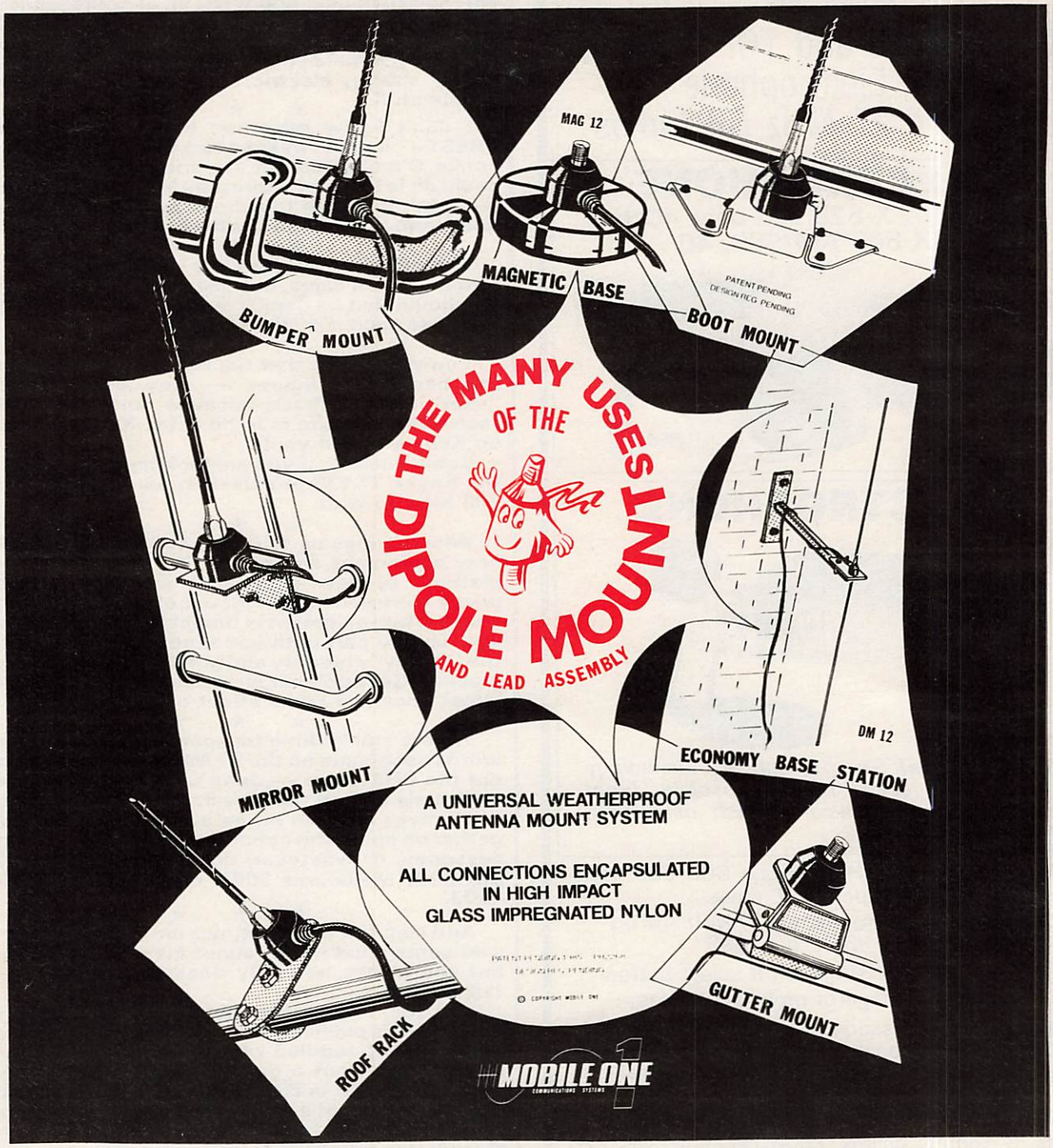

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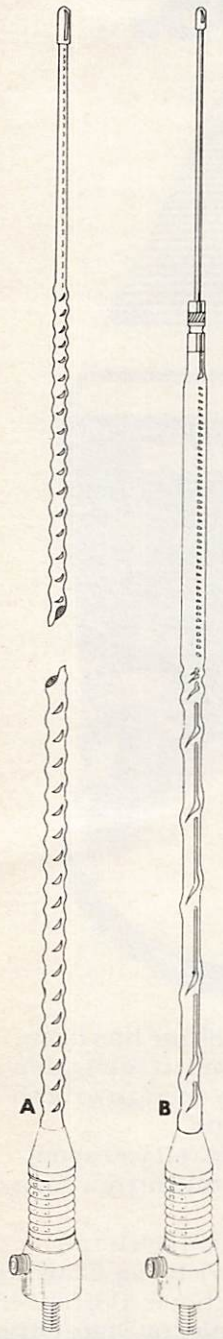

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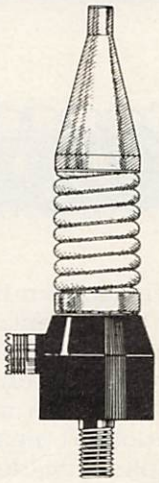

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LOG BOOK

UNSUNG HEROES

CBers fight a constant battle to get good press, and the large percentage of their good deeds go unnoticed. The Sherree Collins Appeal made headlines around Australia, but, in case you have forgotten, Sherree suffered from chronic myeloid leukemia, and needed an urgent bone marrow transplant to save her life.

A trust fund was set up, following requests for assistance to both the NSW State Government and the Federal Government.

The Springwood Lions Club decided to launch a community appeal to raise the $16,000 necessary to finance the operation.

The fund gained momentum from its first annoucement in mid-January 1986 with initial TV support. Some prominent CBers from the Northern Beaches and Southern Sydney took up the appeal over the Citizen Band frequencies during the last Australia Day weekend, 25th-27th January 1986. The untiring efforts of the on-air team brought donations from all over Sydney and they were fortunate to have available a wealth of skip to other States, $1100 coming from Mackay CB Radio Club plus many other donations from distant parts of Queensland, South Australia, Victoria and Tasmania which, when added to the donations from Sydney listeners, enabled a sum of over $3500 to be transferred to the Springwood fund.

The Emu Plains Farm and other groups in the Penrith area put their efforts to the Fund and teamed up with Springwood Lions who called for communications assistance from the CBers from the Northern Areas. This Gala day was a terrific success. The Sydney Radio Group set up a communications net for co-ordination at the different venues. Derek, the SR 46 discussed the needs with Lions and the Group provided a base station and several mobiles. Many of the Springwood Lions also had AM radios which provided a very efficient service to move around the various food stalls.

The enormous effort and team work assisted the overall fund along with the many donations to boost the Fund to well over $50,000 in less than three months. Sherree received her operation thanks to the efforts and generosity of people near and far.

Sherree's brother, Graham Storer, paid tribute to the residents of the Blue Mountains and other parts of Australia who had contributed and assisted the Springwood Lions Club raise the funds for the Sherree Collins Appeal.

Unfortunately, Sherree died suddenly on 26 May while still in the Westmead Hospital, but CBers can be proud of their efforts to help people less fortunate than themselves.

It's a pity the daily media don't give more credit where it's due.

HI HO SILVER

The Adelaide Advertiser seems to be on the side of the CBer — reproduced below is an article from its 3 July edition.

Not that there has been any doubt about it, but this article does point out the advantages of 27 MHz over UHF, as far as long distance communications are concerned.

Another item in the same paper, datelined 24 July, was headlined "CB OUTGROWS ITS COWBOY IMAGE", highlighting the good work being done by ACRM emergency monitors.

Maybe we are making a little progress at last!

SAD DAY

We have been advised that the Australian Association of UHF Operators is now defunct.

The Association was formed in 1979, and has been very active in South Australia over the intervening years. Lack of interest has caused the club to disband, but the standards set by the Association remain.

EIGHT MINUTES LATE

Wednesday, August 13th had amateur radio operators around the world listening anx-

Food drop to couple stranded by desert flood

Police have air-dropped emergency rations to a couple stranded since Sunday by floodwaters in the Simpson Desert in SA's Far North.

The stranded man, believed to be a Mr Blackman-Smith, of Sydney, and his unidentified female companion, have been unable to travel after their four-wheel-drive utility became bogged.

The search for the couple came after a distress signal was picked up by two CB radio operators in Sydney.

The two were sighted yesterday about 130 kilometres south-west of Birdsville, between the Alton Downs and Clifton Hills stations, after a 30-minute air search.

Police said last night it might be days before they were able to reach the couple by land and guide them back to the nearest town of Birdsville in Queensland.

By PATRICK McDONALD

The SA Police Force's Cessna 402 twin-engine aircraft was called in to locate the couple after attempts to reach them by road failed.

"We dropped a load of food to them, and they seem to be OK at this stage," said Birdsville policeman Senior Constable Bob Goad.

He said two 10-man Army ration packs were dropped to the couple giving them enough food and supplies for a few days.

"They ran at the food parcel and picked it up, then waved their hands to say they were all right," he said.

Sen. Const. Goad said the couple passed through Birdsville on Saturday en route to Poeppel Corner (the junction of the Queensland, NT and SA borders) as they tried to cross the Simpson Desert.

They were caught when the heavy

rains which fell in central Australia on Sunday moved south, dropping about 40 millimetres of rain in the Birdsville area.

"It was just like having a monsoon season," Sen. Const. Goad said.

He said it appeared as though the couple's car had become bogged a number of times and that, having freed the vehicle and driven on to a patch of dry land, they were now prepared to wait until the waters subsided.

Sen. Const. Goad said a distress message had been picked up on Sunday afternoon by a couple of elderly CB radio operators in Sydney who contacted him, but he could not make direct contact with the tourists.

All he had to go on was a general position about 150 kilometres south-west of Birdsville, which would have placed them near Alton Downs station, in a swampy area where the Warburton Creek joined the flow-off from the Georgina River.

"That's a bit of a deathtrap, that area, with its black, boggy soil," he said.

He would probably have to wait at least two days before trying to reach the couple by land.

● PAGE 8 – Creek overflows swamp suburbs.

LOG BOOK

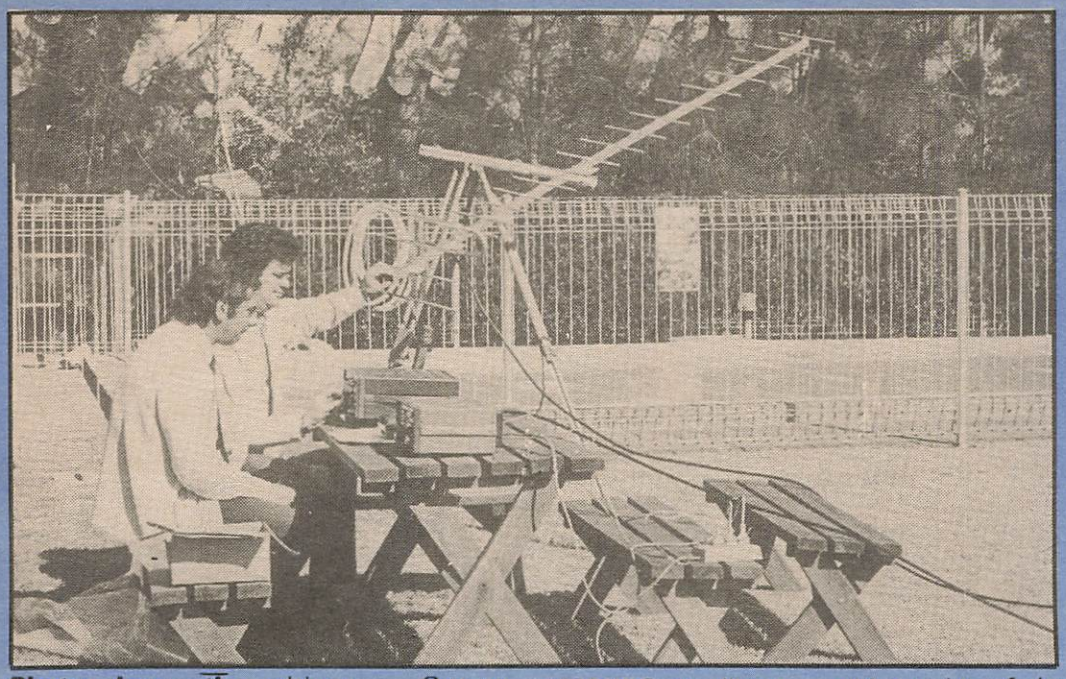

Photo shows the temporary club station of VK2DRS listening out for the JAS-1 satellite on the morning of August 13th. Operators are Ross VK2KRT and Andrew VK2XKK. Picture by Garry VK2YBX.

iously for the first signs of life from the latest amateur radio satellite.

Amateurs have used the Morse Code letters "HI" for decades to indicate laughter, probably because of the sound the Morse Code letters: di di di dit di dit.

It was fitting, therefore, that the satellite radio transmitters would first send this message back to earth.

Launched by the controlling body of amateur radio in Japan, the Japanese Amateur Relay League, JAS-1 Satellite was due to blast into space from the Tanegashima Space Centre at 2031 hours UTC (6.31am East).

The satellite was carried as payload on the test launch of Japan's H-1 launcher and, as such, did not attract the many millions of dollars fees commanded by other methods of launching.

Even so, the satellite itself had to be funded entirely by amateur operators.

With a separation from the launch vehicle over Chile at one hour and ten minutes after launch, the first pass over Sydney should have been at 2248 hours UTC (8.48 am).

Licensed amateur operators employed by Dick Smith Electronics head office in Sydney set up a special station using the DSE Amateur Radio Club's callsign VK2DRS to listen out for the telemetry signals from JAS-1 indicating all had gone well.

The JAS-1 satellite includes a beacon which continually transmits Morse Code data on approximately 435.79MHz in the 70cm amateur band.

Operators at VK2DRS had some anxious moments as 2248 hours came and went with no sign of signals from space.

Then some eight minutes later, at 2256 hours, came the sounds of laughter everyone was waiting for: "HI HI", followed by groups of numbers as the spacecraft transmitted data back to earth.

The laughter from space was echoed on the ground as the amateurs realised all was well.

Shortly (within a few days) the spacecraft would be ready to act as a relay station in space, where amateurs from any country could call other stations around the world via the transponders on the vehicle.

And within a month or two, JAS-1 will become the first "Packet" radio repeater, allowing fully automatic, unmanned communcation between amateur stations having the necessary computer equipment.

The equipment used:

VK2DRS/P was equipped with a Yaesu FT726R all mode VHF/UHF transceiver with 70cm and satellite options, and a RF Aerospace SAT7018GR 18 element 70cm Yagi antenna. Also used was a Yaesu FRG7700 receiver to monitor AMSAT's information service from the US on 20 metres.

WORDMAZE WINNER

The winner of our last wordmaze competition was Mr Stewart Hardy of Tasmania. By the time this issue goes on sale, Mr Stewart should be enjoying the fruits of his labors.

The correct answers to the questions were:

1. Back To You
2. Classifields
3. Club News
4. Repeater List
5. Rig Report
6. Log Book
7. Out West
8. Club Register
9. Down South
10. Sydney Scene

The second question 8 was invalid — this is where the gremlins got at us again, but most of you worked it out without much trouble.

Thanks to Hatadi Pearce-Simpson for donating the prize, and congratulations to Mr Hardy.

If you now turn to page 32, you will find our new competition, with a Whistler Q3000 radar detector as the main prize, plus five Cockatoo 40 channel AM rigs as consolation prizes.

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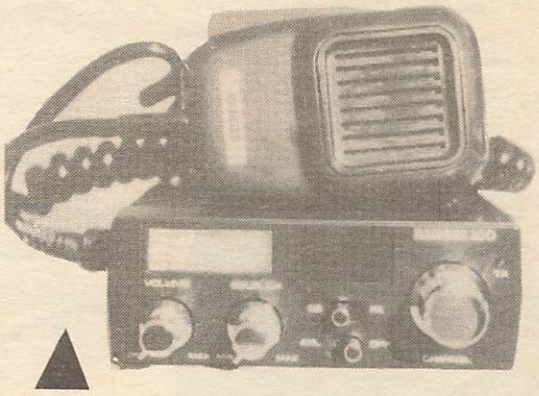

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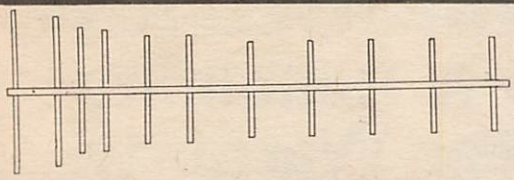

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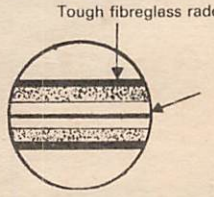

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RIG REPORT

ELECTROPHONE TX475 HANDHELD

The rig tests in this issue could be classified as "Claytons Rig Tests" — the test you have when you are not really having a test ... I know that's not original, but I like the way it rolls off the tongue. Our tech. Ken Reynolds of Power Band, is a mite poorly at the time of writing so all you are going to get is a "hands on report", plus the impressions conveyed by king of test apparatus, the Mk 1 Earhole, aided and abetted by the original, if rheumy, eyeball. Complete with optical prosthesis... Mind you, if the rigs keep shrinking at their current rate, your scribe is going to have to wear a pair of binoculars strapped to his skull, and use a pair of tweezers to operate the controls.

Take this new offering from Electrophone, the TX475 handheld f'rinstance. OK, so it's a handheld, and as such you would expect it to be small, but this is ridiculous! Including the battery pack, sans antenna, the body of the TX475 is a mere 14cm tall, 6cm wide, and 3cm deep — and it still gives the full two and a half bottles of watts on high power, and 500 mW on low power. It weighs in at 465 grams. In a masterly piece of understatement, the unit is described in the handbook as "compact, lightweight..." I'll buy that!

With such compact dimensions it may seem to be superfluous to say that it fits snugly in one's hand, but it really does feel good — and solid. The ident. stickers tell me that the unit is made in Japan, and from the outside it really does bear the trademarks of typical Japanese workmanship. The controls are well thought out, and the whole thing just fits together so well.

Speaking of controls, let me run through them for you and include the features which appear on each panel. On the top deck, rear, there are three sockets which cater for: an external RF/signal meter, external microphone, external speaker. Electrophone offer, as optional accessories, an external speaker/microphone, or headset if you want "hands free" operation. Also on the top deck are the antenna connector, and the transmit/battery indicator. When the PTT switch on the left-hand side of the unit is depressed, the LED glows red to indicate that the rig is in the transmit mode — if it doesn't light up when you press the switch, the battery pack is flat and requires charging.

On the front of the top deck you will find the squelch control on the left, and the on/off volume switch on the right.

Moving right along to the front panel, you will find two slide switches. The uppermost is for high/low power selection, and the lower is marked "Dial-/Tone", but is not operational at this point in time. Below the two slide switches is the "Simplex/Duplex" selector, and the thumbwheel channel selector, which will dial all the way up to channel 99. But, don't get excited — after number 40 you'll not get any joy.

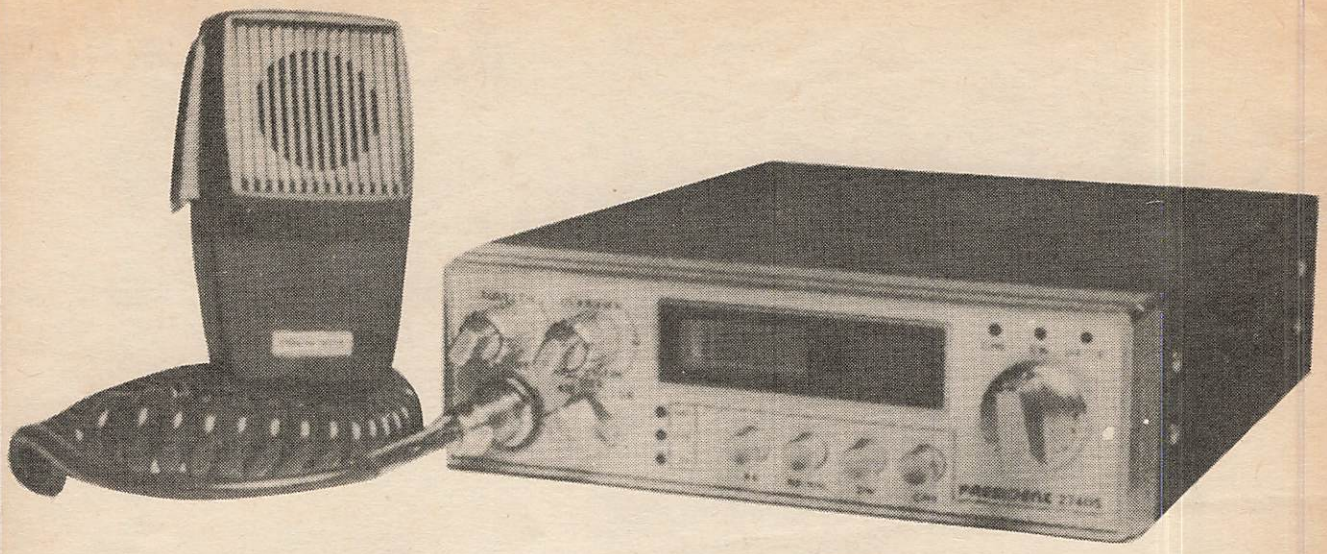
The built-in-speaker/microphone is located on the right of the front panel.

I've already told you that the PTT switch is on the left side panel, and so is the release for the battery pack. The only feature on the right-hand side panel of the battery pack is the socket for the charger. The bottom of the battery pack is equipped with contacts for a desk top charger, which should soon be available.

The TX475 comes standard with the following equipment: 450mA Ni-cad battery pack; 240 volt AC wall plug battery charger; flexible 9cm "rubber duckie" antenna; belt clip; carry case; wrist strap, soft carry case, and an instruction manual.

Options include: speaker microphone; lightweight headset (including a fully adjustable boom microphone and clip on miniature PTT switch; cigarette lighter charger (for charging from the car cigarette lighter socket); mobile mounting bracket (for vehicle door mounting); 3dB gain flexible antenna and, at some time in the future, a desk top charger.

The battery pack charger which comes with the unit is an electronic type, which gives quick charging — approximately four and a half hours from scratch — and at the same time prevents any risk of over-charging. When the battery pack is fully charged, the charging unit automatically switches to trickle charge. The charging unit



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has two lights — one red, and one green — to tell you whether the unit is fully charged.

The belt clip is substantial, and the holding screws located in brass threads on the body of the unit.

The specs as laid down in the handbook are impressive.

As I said at the beginning, there were none of our normal bench tests done on any rigs tested for this issue, but will do so at the earliest opportunity and report an anything worthy of note.

Having said that, let me now say this (?). The Mark 1 Earhole was impressed no end. The recovered audio was full and crisp, even though the speaker is miniscule. Distortion was evident at high volume but the level necessary to produce distortion was well above that which would be considered "comfortable".

Transmitted audio was reported as being good to excellent, and our test station was not aware that the unit under scrutiny was a handheld. It will be interesting to eventually measure the power output of this little sucker, because I was hitting the local repeater full on, which normally isn't possible with a handheld from my base location. On low power, but using the base antenna, it still romped in. Standard Communications, who supplied the rig for test also supplied a full set of accessories to go with it, and I did notice that the 3dB gain antenna performed much better than the short rubber duckie type which comes as standard. The 3dB job is a bit longer, but not what you would call unwieldy by any means.

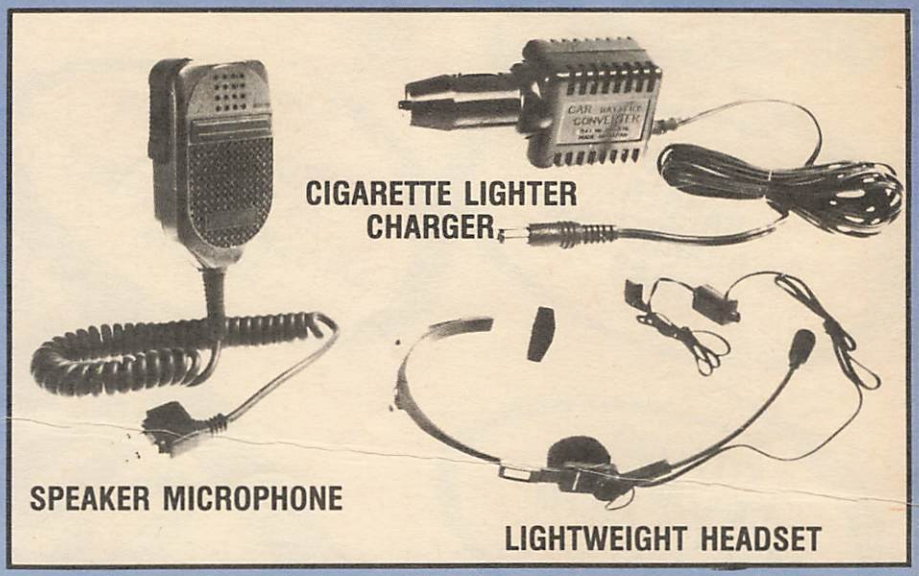
One thing I forgot to mention when going through the gear which comes as standard was the rubber plugs which fit into the sockets for the external microphone, RF/signal meter, and external speaker. Handy if it's raining and you have to fiddle with the volume or squelch control which necessitates lifting the flap on the carry case. It's not an exclusive idea by any means, but I'm glad to see that Electrophone saw fit to include this touch of class.

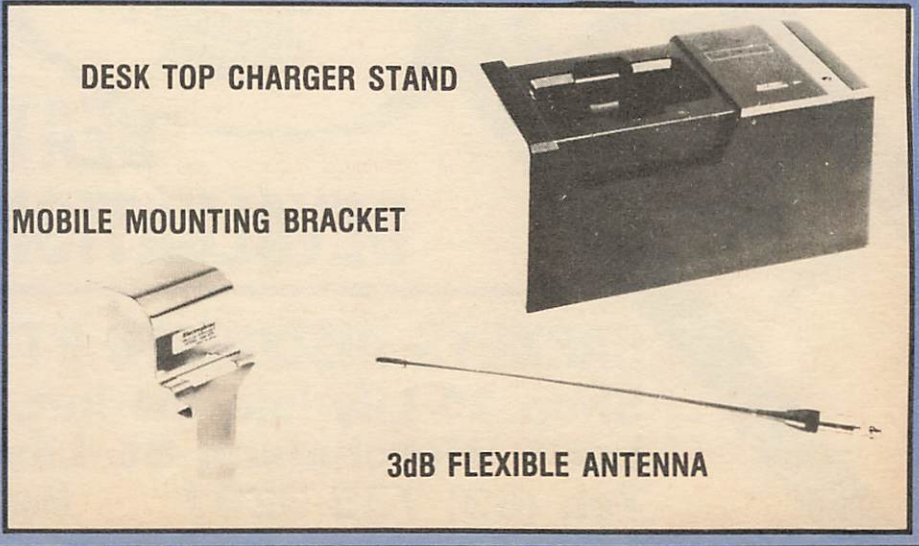
I did take the outer case apart to satisfy my curiosity about the innards. As I suspected from the size of the unit, surface-mounted components have been used, which are real "state of the art" stuff. The internal space is, to put not too fine a point on it, busy. I did notice that the trim pots for tuning the rig had been placed vertically along one side of the main board to facilitate tuning, but I have the feeling that a major repair would require extensive surgery. But, with surface mounted components, component failure should be rare — that's why they use them in space technology, and in addition they reduce the weight on the actual circuit brand. Do I hear the odd "so what"? Well, it's all got to do with the law of gravity, and inertia should you happen to drop the little sucker — work it out for yourself ...

At this point in time, Electrophone are leading the field in this new technology — in fact I don't know of any other range which has surface-mounted components, but no doubt others will follow — they really can't afford not to, competition in the industry being what it is.

To wrap it all up, I really couldn't find anything to criticise in this "user only" test. The design is good, the construction is first class, and the TX475 offers a complete range of accessories. As I said earlier, I'm looking forward to putting the unit over the test bench, but from previous experience, whatever the specs say, that's precisely what you get from Electrophone. All their CB gear has been designed in a functional no-nonsense, no gimmickry manner, and the TX475 is no exception.

Thanks to Standard Communications in Melbourne for supplying this gear for testing.





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SCANNING AROUND

By JOHN WILLMOTT

Scanners have been in use in Australia for more than ten years but it has only been in the last couple that they have received wide acceptance. When I obtained my first set — a ten channel manual change model in 1978 — I had great troubles in finding the right frequencies for the services/uses on which I wanted to eavesdrop. Getting certain crystals cut always presented a problem!

I soon 'moved up' to a state-of-the-art Bearcat which was accompanied by a book of tables which allowed me to calculate the correct sequence of key entries which would, eventually, produce the frequency I wanted. Being a 115 volt model from across the Pacific I had to install an inverter and a transformer in my little Austin Healey Sprite in order to remain mobile.

That was soon followed by a Bearcat 150 (neat and durable), a massive Regency desk model (heavy), a small and unremembered mobile (ugh!), one of the early SX 200s (birdies), an SX 200N (better) and, finally, an AR 2001 (smooth).

Along the way I tried many other models in use by fellow journalists and firefighters. There was the Handic 016, Regency hand helds, Realistics and a variety of exotics.

I read all the manufacturers' specifications and, when someone published them, magazine 'reviews'. The more I read the more confused I became. Output, double conversion, monolythic crystals, solid state — what does it all mean? How does it help the user find the frequency he wants to listen to? How does it help it in deciding on how to programme your 4, 8, 16, 20 or 50 channels?

I was confused — so were most of the scanner owners I knew!

We soon developed an informal system of exchanging information about frequencies and users, but it didn't always work. One operator would be desperately searching for a particular frequency but couldn't persuade another operator to part with it. We all had a few frequencies we considered our own special preserve and wouldn't part with them for anything.

Having gone through all that I won't inflict the same sufferings on readers of CB ACTION. I can promise you there will be no technical chat — no holding back of obtainable information.

So, that's how I see this column working for your benefit. If you agree — or disagree — let me know. Let me hear about your operational problems. DO NOT tell me about technical woes.

With the 1985 decision to make the DOC's Australian Master Frequency Allocation Register (AMFAR) available to the public we now have a reference from which we can learn most of the frequencies we want to find.

True, you need a microfiche reader to discover what is on AMFAR and must be prepared to spend many hours sitting before the screen to find that all important frequency you're searching for.

If you're interested only in frequencies, call signs, user names and transmitter locations then the Frequency Registers published by South Australian-based ESG are just the thing for you. Covering the range from about 35 MHz up to 520 MHz, the Registers are currently available for South Australia, New South Wales and Victoria. There's a whisper that a Queensland edition will be available shortly.

At just $24.99 a copy, including postage and handling, they are a handy basic reference which allow the scanner operator to quickly identify a 'captured' frequency or to choose the frequencies he requires.

Looking at the frequencies used by the various emergency services in Australian States I can't help but wonder how we would all fare in a major natural disaster. Except in a few border areas, our emergency services seem to have very little in the way of compatible operating frequencies and equipment.

While DOC has reserved 467.875 MHz to 469.425 MHz for use by Police/State Emergency Services Australia-wide, the degree of equipment development varies from State to State. New South Wales has a very limited operational use of UHF while Victoria has pushed its use just about as far as it can. South Australia has gone almost totally UHF in metropolitan Adelaide but is still experiencing problems in the nearby hills areas. The South Australian Government's recent announcement that $4.9 million is to be provided for the construction of an underground communications and emergency operations centre will result in better coverage — and digital voice protection (DVP). Try scanning that!

On the VHF scene, South Australia is at 72-73 MHz while New South Wales works 83-84 MHz. Victoria sails along on 168 MHz.

The country's volunteer fire services are in even more of a mess with NSW being perhaps the best example of a 'Clayton's' radio network. Victoria and South Australia are both in the process of developing very fine networks but are, to some extent, restrained by the general lack of appreciation among firefighters of the need to use their radios correctly and intelligently.

The SA Country Fire Service Headquarters net is a superb structure but is being put to its full use only by the full time headquarters staff and regional officers.

In the next issue I will take a closer look at our fire service networks and identify some of the frequencies readers will be seeking in anticipation of the approaching bushfire season.

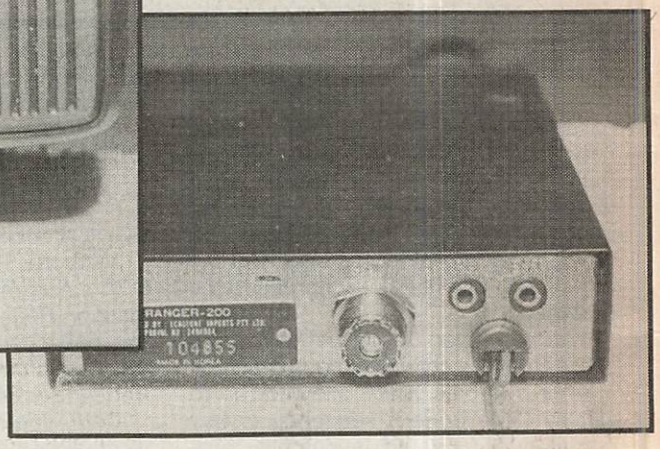
Having had a good look at the DOC AMFAR listings, I was quite amazed to find that it is not a 'national' listing but rather a collection of State listings. It is totally lacking in uniformity with each State having made its own decisions as to what is included or excluded.

Victoria has clearly identified Customs' frequencies where other States have excluded them. Northern Territory Police are identified as such while other States have simply recorded 'Government'. However NSW slipped up and let two entries go through as 'NSW Police'.

Not that it matters very much. Any schoolkid watching local TV knows that VKC is the Victoria Police. So, it's not too difficult to work out what VKA, VKG etc. really are.

I've just seen a copy of a magazine called 'Australian Scanner's World'. All I can say is that the most accurate thing in it is the introduction which states: "The publisher makes no claims regarding the accuracy or completeness of the listings".

Good listening!



RANGER 220 AM

Due to the lack of a tech this issue, the reports below will take the form of a review, rather than our normal rig test, which incorporates results obtained from bench test equipment. Two rigs have been selected for review — the Ranger 200 AM only from Echotone Imports, and the successor to the Colt 45, the Colt 55 from Electrophone, distributed by Standard Communications.

RANGER 200 AM ONLY

Like some of the rangers from the Wild West, this Ranger 200 comes dressed in basic black, and looks like it means business. The 200 follows the style of previous Ranger rigs tested a couple of issues back. The outer case is solid, and fits together in reasonable fashion, with a seal around the back panel to keep some of the nasties out.

On first inspection, the front panel gives the impression that the rig has been over-simplified, but a closer look reveals quite a few features.

Firstly, the Ranger-200 has been blessed with a front mounted microphone, located on the left side of the front panel. Next to the mic. connector is a concentric, or piggy back rotary control, with the inner section devoted to on/off/volume, and the outer ring to squelch operation. Moving further right we find a three position toggle switch, which selects the emergency channel, channel 9, should you want it in a hurry, or, in the lower position PA (public address) mode is selected. The middle position returns you to CB mode. There is a small LED on the lower right hand side of the channel indicator to tell you that the emergency channel has been selected — the LED channel readout does not change from whatever channel you were on before you hit the channel 9 "emergency" switch.

The RF signal meter is an electronic device, with a row of LEDs to give you an indication of the strength of a received signal, and the relative power output on transmit. There is another LED located at the lower left of the channel readout window which varies with the intensity of modulation.

The channel selector is the rotary control on the extreme right of the front panel.

All controls felt crisp in operation, and although small are still easy to use.

The rear panel is common or garden-type stuff, with the antenna socket, non-removable power cord, PA socket, and a socket for an extension speaker. There is also an identification tag which tells all and sundry that the unit was made in Korea.

The microphone looks somewhat familiar — very similar to the standard Electrophone job, but colored black. The mic connector is a four pin screw on type.

The mounting bracket could best be described as adequate, and is not slotted for easy dismounting, however, as someone was quick to point out, a few deft strokes with a hacksaw will soon fix that.

On air, the Ranger-200 performed quite well. Without the benefit of instruments, the sensitivity seemed to be within the specs quoted in the handbook — 1.0uV for 10dB SINAD. It wasn't spectacular, but then AM only sets rarely are. Selectivity was good — my friend down the road a piece wasn't doing me any harm on the next channel despite the fact that he had his power mike flat strap as usual — and over modulating, as usual, which gave the adjacent channel rejection a good score also.

The adjustable squelch could be set fairly fine, and seemed to exhibit a nice degree of hysteresis, but once again test instruments would be needed to give a definitive value. At high settings it blocked out some very strong signals, which is the way it should be.

Incoming audio was surprisingly good for such a small speaker — a bit on the bassy side, but quite pleasant to listen to for extended periods.

The transmitted audio received good scores from four different stations.

Finally, the handbook. Although small, the handbook gives all the necessary information you need to get on air, including some helpful hints on setting the squelch, and an explanation of why you can't hear any other station while you are transmitting yourself. There is also a block diagram of the circuit, and a full schematic diagram of the circuit — don't lose it, it could be essential in the years to come. Not because we expect the Ranger-200 to give trouble, but because from bitter experience with older rigs which have now gone out of fashion, but are still eminently useful — if one only had the circuit diagram.

The Ranger-200 looks good, and performs well — an ideal first rig for the new CBer to cut his teeth on, or for the truckie who wants a "no bells and whistles" rig, with small dimensions.

Our thanks to Echotone Imports for the test rig.

COLT 55

Faithful readers will recall that the predecessor to this rig, the Colt 45 got a pretty good wrap in these pages, so the Colt 55 has got somewhat of a reputation to live up to. It's a pity that we didn't have our tech available to run the test rig over the bench to get a head to head comparison. But, never mind, you can be sure that when young Reynolds is back on deck, we will do so, if only for our own information.

The Colt 55 is much more compact than the 45, and comes in any color you like, as long as it's black. The case components fit together quite well, and this unit also features a seal around the back panel to keep some of the nasties out.

The microphone placement is an improvement on the new model — it is now located on the front panel, left-hand side. The mic socket features a screw-on type fitting. The mic itself is fairly run of the mill.

There are only two rotary controls on the front panel — the control on the left is for on/off/volume, and the right control operates the variable squelch. Both controls are of good quality and feel "right".

Beside the squelch control, to the right is the channel indicator which also houses the RX/TX indicator LEDs. There is no S/RF meter at all — either electronic or anologue, which seems to be a backward step.

The channel change mechanism is located on the far right of the front panel, and is operated electronically, incorporating a separate channel 9 selector button, for going directly to channel 9 in an emergency. This button is located in the centre of the "channel up" and "channel down" buttons.

There is no doubt that the electronic channel change is a step forward in some respects, but it does have one drawback — unless you happen to be an emergency monitor, or like to leave your rig tuned permanently to channel 9. Every time you turn the rig on channel 9 is automatically selected, regardless of what channel it was tuned to prior to switch off. This is similar to the Philips FM320 UHF rigs, which automatically return to channel 11, the call channel, unless you take the trouble to reset the "nominated channel" internally. But at least with the Philips rigs, you know that you have this option available. The same may be true with the Colt 55, but we could not find any reference to it in the handbook.

A minor point, but one which can be irritating if you are in and out of your mobile fairly often during the day. It can be overcome of course, by running power directly from the battery and bypassing the ignition switch. But, don't forget to switch the rig off at night — not that it draws much power, but if your battery is a bit dickie, it might just make the difference between happiness, and a push start.

The back panel is standard, except that the Colt 55 does not offer the luxury of a PA facility. The ident sticker on the back panel indicates that the Colt 55 is also a product of Korean technology, similar to the other rig reviewed in this issue.

The mounting bracket is a quite sturdy affair, and has quick mounting slots like the rest of the Electrophone range. The rig to mount securing screws are a bit different though. They are much smaller than those which we have been used to in the past both from Electrophone and other manufacturers. The knobs are still knurled, but their size would make it difficult to get much tension on them, so the manufacturers have provided slots to take a Phillips head screwdriver.

This could be a small point towards added security — not all thieves carry a Phillips head screw driver in their back pocket, but let's fact it — if they are serious, they will take the dashboard and all . . .

The handbook is quite good, covering all aspects of installation and the necessary warnings, plus a section on suggested channel usage for AM and SSB.

The handbook also has a circuit diagram, and an illustration showing the layout of the components on the top of the PCB. On air performance was quite acceptable. Sensitivity seemed to be up to the spec stated in the handbook — 0.5uV for 10 dB SINAD — and we would not be surprised to see that the test instruments tell us that it is indeed better than that. Adjacent channel rejection was acceptable, but not sensational, and the tone of the recovered audio quite pleasant to listen to for long periods. The transmitted audio was reported as being good.

To wrap it up, the Colt 55 is a good performer for the money. The recommneded retail price is around $120, but it isn't hard to pick one up for under $100 — not far under mind you, but still, under $100. The only small criticism we could make was with regard to the fact that the channel you had when you switch off isn't the channel you get when you turn back on.

Maybe we are just lazy . . .

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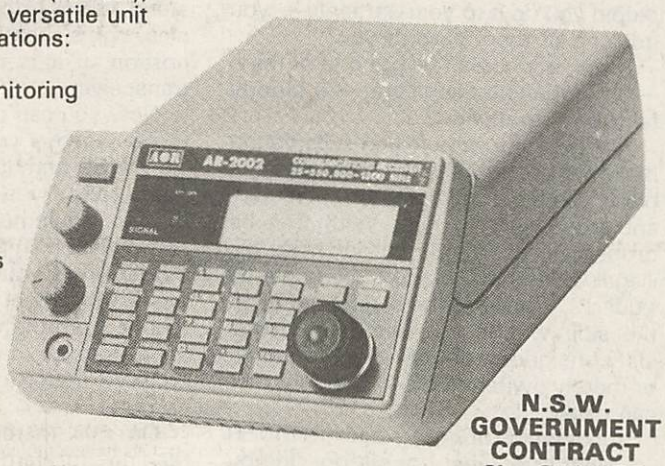

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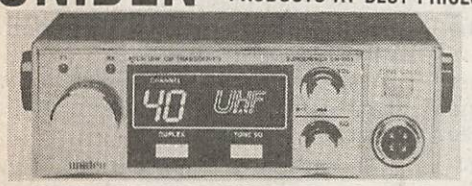

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"WHO'S GOT THE SWER?"

BY LEN SHAW

It's an amazing thing, but, even after all these years of CB in Australia you only have to listen one night to be reminded that about 60 percent of operators still really don't have half a clue on what they're talking about. . .

Forget the foulmouths and other assorted nerds whose main claim to fame is that they can walk and chew gum at the same time and sit on the side while one of those interminable discussions (usually referred to as "Quewsos") takes place between the "old hand" and the "new bloke".

The latter has usually just purchased his first Super Sidewinder Turbo with 143 channels and 300 watts for $20 from the local Trading Post and is on air all hot to trot and work the world.

Sadly he hasn't really got a clue or he would have realised that his Super Sidewinder Turbo was really only worth $4 anyway, but, he manages to hook up with the "old hand" who, having first told him that he sounds as though he has his head in a bucket of porridge, then decides to give him the benefit of his very doubtful knowledge.

The new bloke, staggered that he's managed to get someone to talk to him in the first place, is all ears and OH (old hand, dopey) gets straight down to business.

"Now listen sport, I've been here since we was called bloody pirates and I know bloody near everything there is to bloodywell know about CB so just shut up for five and I'll tell you what you need to do, but, first — go the breaker".

The following 10 minutes are occupied by an exchange between OH and Breaker in which B says that OH wouldn't have a bloody clue and OH tells B to rack off or he'll come around and rip his antenna off his dunny roof.

B, suitably impressed by the logic of OH's argument (and not sure whether OH is bluffing when he says that he knows where B lives and is not bloody kidding) decides to go on the side and simply drop the odd carrier or three for a few minutes before he gets tired of this and noddies off to annoy someone who **doesn't know where he lives.**

So OH gets off to a flying start.

"Rightho sport, first thing you gotta do is "swer" your antenna - do you know how to do that?"

New bloke does not have a clue what "swer" is to start with so asks the obvious, "No I didn't get one of them when I bought me set".

"You don't buy the bloody thing stupid you do it to your antenna — you got one of them haven't you?"

"Yair, of course I've got one of them — whadda you think I am — a bloody nerd or something. . ."

OH gets into a huff and tells young bloke that so far he's concerned young bloke can blow the bum out of his SST and good luck to him. With that he drops one enormous carrier from his illegal Uniden 2020 and goes instantly "quert", leaving all the sandbaggers on the side wondering whether OH had just consigned a set of valves to the pit or merely switched off to have another can or six.

All of which brings us back to SWER — what is it, what does it do, do you really need it anyway and, if you've got it what are you going to do with it...?

For openers it is not, repeat not SWER, although that gets close.

All you fellas that know what "swer" is can buzz off now because that's what we're into in this part of the rag.

What is casually referred to as swer is in fact properly termed voltage standing wave ratio which is generally abbreviated to SWR, hence, the misnomer of "swer".

Without getting ridiculously technical (although you'll need to know the full technicalities if you ever decide to try for an amateur Novice callsign) SWR is an extremely important part of any form of radio communication.

Your CB rig, including the previously mentioned Super Sidewinder Turbo with 300 watts of fading power, is designed to match a 50 ohm antenna — and the coax between the rig and the antenna must also have the same 50 ohm figure.

Now it really doesn't matter whether you know what an ohm is and if it makes more sense to you call them bananas. Your rig is designed to match a 50 banana antenna and coax and, if something is wrong with your coax/antenna system, you might find that the rig is looking at 50 pineapples instead of bananas.

This causes what is called simply a mismatch and the full power output of your rig does not go up the coax, into the antenna and off into the night. Instead, it runs into those bloody pineapples, gets totally confused and a portion of it is reflected back to the transceiver.

Now you can't look out the window to see whether your rig is nicely matching the 50 ohm (or bananas) of the antenna and, if you do not have the right piece of equipment (an SWR meter — sometimes built into the rig if it's a late model one), your first indication of a mismatch might well be a puff of smoke from the transceiver as the bananas turn into mush. What you need is an SWR meter (or VSWR meter to be correct).

On this there is usually a switch reading "forward" and "reflected" and a variable control to set the needle to the "forward" position.

With the rig connected through the meter to the coax and antenna, you put the mode switch onto AM (to generate a carrier) and briefly transmit. As you transmit you move the variable control to the "forward" mark.

You then move the switch to the "reflected" position and again transmit.

The needle will indicate the VSWR reading and if by some remarkable series of fortunate happenings it reads 1 to 1 you're laughing. If, however, it returns a reading of, say, 3 to 1, you've got problems.

As a generalization, the lower your VSWR is the better you'll be able to pump out the power (well, maybe 5 watts ain't a helluva lot but it's better than nothing) into the antenna and the better you'll be heard around the world.

On the other hand, if you run the rig with a reading of 3:1 you'd better hang onto this magazine to read the names of the advertisers who will be able to fix it when it blows up.

It's not essential to have a reading of 1:1 although that's the ideal set of numbers.

On the other hand it is essential to have something well under 3:1.

A VSWR reading of 2:1 may not cause your rig to instantly fall about on the floor, but, it sure will reduce your rig's power effectiveness.

There's not much point in spending a heap of cash on a huge beam antenna if your rig is running into a heap of pineapples half way up the coax when you're trying to transmit 50 bananas — it's looking for something that is a close match and, if it's not, the power is reflected back into the rig where, given enough reflected power, it will quickly and effectively melt something.

A case of high VSWR is caused by either the feeder coax or the antenna — not the rig.

The rig can be tuned for maximum power output into a dummy load, but it can't be tuned for minimum VSWR.

To find whether it's the coax or the antenna which is causing the problem is easy. Purchase a 50 ohm (don't ask for a 50 banana) dummy load from your friendly neighborhood CB shop and connect it to the end of your coax.

Go through the business of applying power and setting forward power on the meter, read reflected power (VSWR) and, if it's low then the problem is with the antenna.

If it's high, the chances are that you've stuffed up the PL259 connection and all you need to do is start again and do it properly. If you own or can borrow a multimeter this will quickly indicate whether your connections are OK.

If the coax checks out then the problem is with your antenna and the only way to sort this one out is by a process of checking each and every fitting, join or whatever or, naturally, playing with any form of adjustment on the antenna itself.

If you're using a mobile whip type antenna, the initial VSWR reading after being fitted to your car could well be high without there being any problem.

This is simply because manufacturers build mobile antennas to a compromise length and final tuning is usually left to the purchaser. Some of these mobile antennas have an adjustable tip which can be moved to provide the lowest VSWR at, say,the middle channel of your rig and so giving an acceptable VSWR right across all channels.

There are two ways to improve the VSWR of your mobile antenna — you can either shorten or lengthen it.

If you take a reading on channel 40 and it's higher than on channel 1 then you need to shorten the antenna; the reverse also applies — if its higher on channel 1 then you need to lengthen it.

Almost without exception, if any adjustment is required it will be to shorten the antenna, but, don't get carried away.

When checking, transmit very briefly and carefully trim the antenna until the reading starts to come down.

As it gets lower start to trim very cautiously or you are likely to go past the point of minimum VSWR — see the article in our last issue.

The main thing to remember is that "Swer" is important.

There are of course many other things which can effect an VSWR reading including moisture seeping into the coax, proximity of the antenna to a lot of metal such as a corrugated iron roof, pinched coax where the outer earth shield touches the centre conductor, but, the big thing to keep in mind is that you do not, repeat DO NOT, operate your rig without carrying out a periodical check on the bananas and pineapples.

There used to be an old fool on air, pirate and all, who went by the callsign of Fred and I vividly recall one night when Fred was holding forth on the necessity of having the right "Swer" when his signal suddenly dropped to almost nothing and Fred could just be heard muttering about the "bloody swer just went up" before going totally quiet.

When the story came out sometime later we found that Fred's enormous five element quad antenna had suddenly carked it and fallen off the tower and the reason for the swer going up was that the whole bloody thing was lying in next door's backyard.

As I said "Swer" (or more importantly too much of it) is important.

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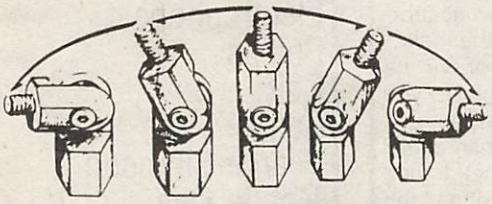

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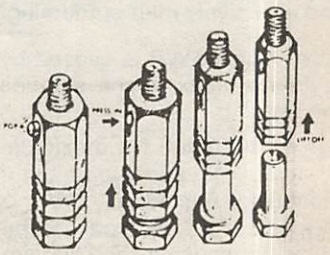

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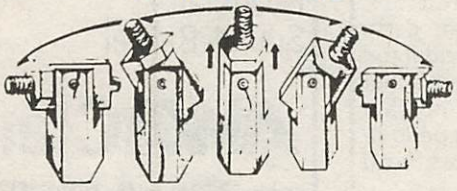

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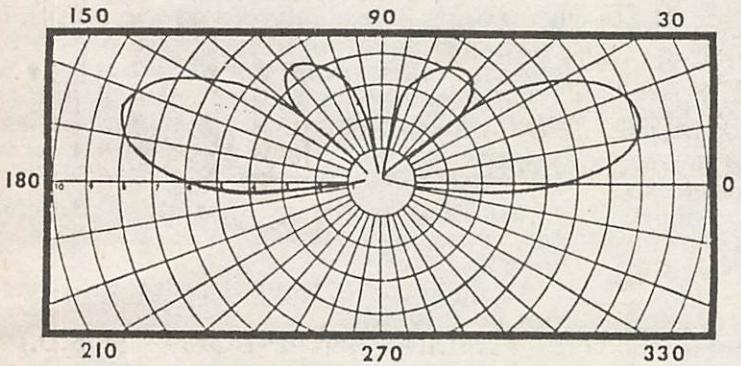

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Queensland Scene

By ROD FEWSTER

If you glance through the last few issues it becomes obvious that the current trend among the "would-be-if-I could-be" set is to try to boost their images at my expense by poking it up me in the pages of CB Action.

Sorry, wimps!! When someone of consequence starts in on me, then I'll start worrying. You pathetic specimens are only feeding your own puny egos!!

Intelligent readers (they're the ones who UNDERSTAND what I write) can see the green faces behind your grotty little put-downs and feeble attempts at sarcasm.

Once a Good Buddy...always a Good Buddy!!

Good Buddy!!

★ ★ ★

A lot of Brisbane readers will be sorry to hear that Scott, Mike Charlie 44, has been transferred back to Sydney by the Army.

Scott blew into the Brisbane CB scene a while back like a breath of fresh air over a mangrove swamp, bringing with him the Mike Charlie tradition of helping elderly, disabled or infirm people get into CB radio.

He soon organized a small group of like-mind CBers, and they ran around all over the Brisbane area setting up stations and erecting antennas for those who were unable to do the job themselves, for whatever reason. Now that he's gone, hopefully the Mike Charlie group he left behind will keep up the good work.

Not that Scott was a Good Buddy. He used to join in the fun, dropped the odd colourful adjective, and liked to get involved in a bit of stirring from time to time. He was just a guy who got his kicks out of helping other people.

Pity there weren't a few more like him.

★ ★ ★

Speaking of elderly people, Rockhampton has the "oldest" CBer, both in years and time spent as a radio operator, that I know of.

Old Dave, aged 86, is an active CBer whose ties with radio date back to the early 1900s.

Dave was involved with a Western Australian group which actually spoke with Marconi himself while the great man was aboard the "Electra" in the Mediterranean Sea. He also corresponded with Marconi by mail, and still has a couple of old letters written by Marconi's personal secretary.

He was part of the Subiaco Wireless Club, the memory of which would no doubt make many an old-time ham shudder. (They were early "renegades", regarded by many amateurs of the day in much the same light as the hams of the late sixties and early seventies regarded CB "pirates".)

In his younger days Dave knew guys like Keith Anderson and Charles Kingsford-Smith personally, long before their names became part of Australia's history. Dave was one of our earliest truckies, and he can tell some wild and woolly tales about driving in the Australian outback when the only roads were the ones you made yourself and a breakdown could mean dying of thirst if you couldn't fix it.

Although he's getting on in years Dave still tries to keep active. His latest project is building electronic alarms which can be carried by very old people and used to attract attention if they need help...if they fall and can't get up without assistance, for example. (Dave is a member of Rockhampton's Inlander Radio Club, and the club recently donated $150 towards the cost of purchasing components for these alarms.)

It seems that a few of the local louts reckon Dave's just a silly old bugger living in the past, and give him a hard time on-air whenever he talks about the early days on radio.

I don't know why these creeps don't stick with others of their own intelligence level by pissing off to the AM call channel and calling for spunky YLs all night.

Some of us are interested in listening to a guy who has REALLY "been there, done that".

Hang in there, Dave. Don't let the bastards get you down.

★ ★ ★

A Brisbane CB operator recently found himself poorer by a thousand bucks plus costs and minus several bits of expensive equipment after appearing in court on charges relating to unlicensed UHF-CB transceivers and illegal cordless telephones.

This character, regarded by many UHF-CBers as one of the rudest, most ignorant operators ever to hit the airwaves, apparently thought he could ignore DOC regulations and ride roughshod over the rights of everyone else on the spectrum, even to the extent of using the 5/35 emergency repeater as his own "business channel".

A couple of days before the "bust" the loudmouth boasted on-air that he'd been visited by the RIs, and that they couldn't touch him because of a loophole in the RadCom Act which meant that he couldn't be charged with breaches of the terms of his licence because he didn't have one.

Talk about pulling the tiger's tail!!

The RIs were not amused, and they showed their lack of amusement by paying him another visit and giving him a going-over

which resulted in his recent court appearance.

Now he's back on-air, still as rude as ever. The words "breaker", "please", and "thank you" obviously don't form part of his vocabulary.

And he bleats that other operators won't give him a fair go.

Some people just never seem to learn.

★ ★ ★

While we're on the subject of pests on radio...in the last issue I predicted that the 6/36 "organ grinder and performing goat" show was about to close down for good.

My prediction was right. The show has folded. Maybe not for good, but at least until the next ratings period.

Unfortunately the removal of the performing goat doesn't seem to have had the desired effect on the organ grinder. He's still hanging in there, trying to make it into the big-time.

Here's another prediction...if he keeps it up he'll be right up there in the spotlight with his stupid mate.

★ ★ ★

Interesting to read in "Sydney Scene" last issue about the two Western Radio Club members who were supposedly kicked out because of a disagreement over the running of the 2/32 repeater.

Fair suck of the saveloy!! Even up here in the Forgotten North (where news from the Big Smoke is rare) it's common knowledge that the disagreement was over the whereabouts of quite a substantial sum of money received in payment for the elusive "Scanner Frequency Register".

Apparently the Western Radio Club has been innundated by angry CB Action readers wanting to know why they haven't received copies of the "Scanner Frequency Register" for which they paid months ago. (Has ANYONE ever seen a copy?)

I myself received four or five phone calls from people complaining that not only had their cheques been cashed months ago and the goods not delivered but also that their subsequent letters had been totally ignored. (One caller told me that he intended reporting the matter to the NSW Police Fraud Squad, as he had written to the Western Radio Club three times over the past six months or so without receiving a reply.)

Now it turns out that only a couple of members were responsible for the publication of the "Scanner Frequency Register" and they had complete control of the money paid for same, and that Western Radio Club members in general were not aware of the "unusual" way that business was being done until the complaints started rolling in.

I understand that cheques sent during the past few weeks have been returned with an explanatory note from the Western Radio Club.

Until this matter is cleared up satisfactorily I strongly advise readers against sending money for the "Scanner Frequency Register". (This register has no connection with another which is mentioned in this issue. Ed).

★ ★ ★

Well, the poor old Aussie dollar is back down in the low sixties again.

Remember how all the CB importers lowered their prices when the dollar went back up into the middle seventies, after slugging us with hefty price increases when it plummeted down into the sixties? What? You don't? Funny thing, that. Neither do I.

What I do remember is that, when the dollar dropped into the low sixties for the second time, prices increased dramatically AGAIN!!

Blaming price hikes on long-term letters-of-credit doesn't impress me much. This method of paying for imports is a no-lose situation. If the dollar goes up, you save a bundle.

If it drops, you just whack prices up to cover the difference. It's like you and I playing roulette using only your money, with me claiming all the wins and you wearing all the losses.

Whoever said "The Buck Stops Here" sure as hell wasn't a CB importer. The way prices are going they'll want a week's wages for a PL-259 plug soon.

★ ★ ★

What were staff members of a Brisbane suburban branch of a national electronics specialist chain doing wielding price-marking guns around in the middle of the night recently?

Surely they wouldn't remark old stock with new higher prices, would they?

★ ★ ★

Still no sign of the proposed 4/34 Gold Coast repeater on-air.

According to the rumours doing the rounds, when it becomes a reality it will have been buggered about with as it was when it was installed on an experimental basis a few months back, with its receive capabilities cranked down to almost zero to prevent Brisbane access.

The only possible reason for doing this would be to promote the repeater as a "local business channel", and that's NOT what CB radio is all about!!

It's time hobbyist UHF-CB users started fighting back!!

★ ★ ★

A friend of mine recently returned from Bangkok, bringing back a videotape of an Eric Clapton concert. This had obviously been recorded on a previously-used cassette. After the concert was a segment of a war movie showing the inside of a Japanese submarine which had been whacked out by depth charges. On the radio operator's desk, in plain view, sat a Radio Shack battery-powered morse code practice key and oscillator.

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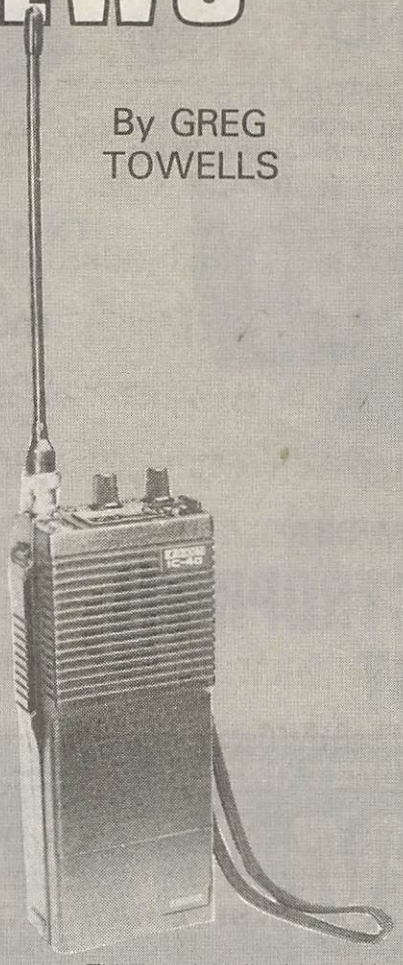
UHF NEWS

By GREG TOWELLS



Interest (and sales) in UHF CB continues to increase out of sight. More and more people are discovering the advantages of UHF operation, and the myriad of uses that this noise-free and repeater-assisted service can provide. At the same time, handheld radios are getting smaller, and can be used in just about any location. Yet they give extremely reliable communications, particularly when operating through a repeater. It continually amazes me when, replying to a simplex station, I find he is on the other side of Sydney, operating portable!

★ ★ ★

A few stations with scramblers have been appearing around the band, particularly on the repeaters. In each instance, the behaviour of the operator using the scrambler has confirmed my doubts about allowing these devices to be used on UHF CB.

One mindless cretin even went as far as to harrass users of the ch. 3 repeater in Sydney, by switching his scrambler on and off whilst transmitting over the top of stations using the repeater. Action should be taken immediately to prevent these devices becoming widespread.

If a message is too confidential that a scrambler is required, then it should not really be transmitted on the citizens' band. What do **you** think?

★ ★ ★

It is pleasing to see the repeater network continuing to expand around Australia. During my travels outside the city, it seems there are new repeaters springing up all over the place. Most of these repeaters have outstanding coverage, the only disappointing aspect being that there are so few operators utilising them it is sometimes difficult to get a conversation, or even identify the repeater. Let me know about any new repeaters in your area, and any other information if possible.

★ ★ ★

Sydney's continuing 2/32 repeater debacle goes on...and on...! As reported by CBA earlier this year, the Blue Mountains Repeater Association pressed into operation an excellent repeater, operating from the lower Blue Mountains. This was initially done with the blessing of the Western Radio Club, whose remaining UHF members led a successful motion to 'hand authority' over at a general meeting.

After five months of trouble-free service, the association was notified by DOC that the subsequent 'transfer' of the repeater licence was not valid, and 2/32 was to cease operation. Apparently the Western Radio Club (who, despite having held the licence for over three years, are yet to establish a permanent operational repeater under that licence) had a change of heart — jealous of the speed with which the BMRA had 2/32 on air?

Despite losing all of their UHF operators, they still claimed the ability (and the right) to own the repeater, and even assured the Department that they were capable of having their repeater equipment operational within 48 hours of the BMRA's station being closed down.

As expected by most of Sydney's UHFers, the repeater has not even come anywhere near the hill, let alone be operational, as of August — over two months since the BMRA shut down their repeater. It's on **again!**

This is an example of a group denying UHFers use of a repeater, by holding a licence and not establishing an operational station. DOC should act in instances such as these, and withdraw the licence — thereby giving genuine groups a chance to establish an operational service for UHFers and not simply hold a licence for the sheer glory of it.

★ ★ ★

The operator on Sydney's Prospect ch. 3 repeater, who yacked on for ages and then remarked about flukey conditions, amused more than a few people. He reckoned it was amazing that everyone on channel was coming in at the same signal strength!

After the laughter died down, someone pointed out that he was operating through the repeater, not simplex!

★ ★ ★

Some hints for new operators using repeaters (and for some long-time users). Most repeaters have a time-out period — that is, the repeater will cease operation after a continuous transmission which exceeds the time-out. For example, 1 minute time-outs are common. The repeater then resets after the offending signal has stopped.

Be aware of this time-out feature, and avoid waffling on at length on repeaters. Also, leave a break between overs to allow other stations to break in if required.

★ ★ ★

There has been an increase lately of operators claiming exclusive rights to 'their' channel, and proceeding to jam out and disrupt any other operators attempting to use the channel. One glaring example has been the big-mouthed truckies claiming the 'suggested' road channel, ch. 40, as their own.

These misguided operators generally carve up a conversation with their claims of "this is the truckies channel, get off!", or words to that effect. This is just not on.

Besides being illegal under DOC14 and the Radcom Act (regarding deliberate interference to users of the RF spectrum), no single group has even a moral right to simply 'take over' a frequency. It is totally against the spirit of CB radio. What is your opinion?

Remember — repeater news, your opinions and any general UHF info — please write to 'The 477 Report' PO Box 358 Granville NSW 2142.

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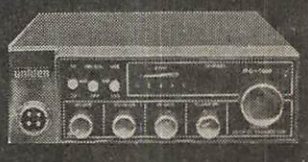

UNIDEN PC122

SYDNEY SCENE

By Steve Griffin

Welcome to the 2nd bi-monthly issue.

Firstly, thanks to all those people who sent letters after last issue. A few letters seemed to be based on the familiar problem of ratbags, language and the type of children that are over the age of consent but still use the airways in a similar way to toilet paper. To give an example: F. J. of Richmond states 'I think it's a shame that so many old returnees or potential new CBers are turned away by what they hear before they even speak to anyone. It seems to be a pointless, expensive exercise, due to the mindless, childish vandalism of the airwaves. Things like music playing, carrier dropping and all sorts of 'intelligent' sounds are more commonplace now than they were when I last used a rig four years ago.'

Mr G. P. OF Warriewood Beach states 'As a new CBer the only thing that has marred my enthusiasm has been the language used by those I think you call 'wankers' particularly on the 27MHz band and when family is involved.'

Mr J. T. of Narrabeen states 'As an old CBer from the pirate days I have decided to bury my CB under a pile of junk in my bedroom for six months to see if, when I turn it back on, the band will have improved. I know this may seem funny but it's true. The amount of idiots that are starting on air around here is too much to handle, especially the language. I can remember once that it used to be a challenge and a new experience just making contact with another station. Now the radio seems to be a way to release aggression, or maybe the people from the various nut farms now own CBs and it's just me that's the odd one out.'

At least there is a good side to these letters — they all like this magazine and are regular followers.

We must all bear in mind that there is this type of person in nearly everything or everywhere we go. Even the police have their share of the ratbags, taxi operators even cop it too. So the list goes on! Nobody should be disheartened by the fact that these people exist, simply because sooner or later they will get bored or at least update to something bigger, brighter and better.

★ ★ ★

Tony Hunt of CREST (Citizens Radio Emergency Service Teams) has informed me that their annual fete participation time is just about here, so keep an eye open for the 'Orange Blossoms Festival' run by the Lions Clubs. Castle Hill and North Rocks are the venues and should be coming up very soon, sometime in September or early October. Also, on 11 October the Chamber of Commerce of the Guildford area will have their annual fete and CREST will also be attending, so drop in and inspect their stand.

★ ★ ★

A bit of info from the GLC Eastern Base Club was expected to arrive before this article was due in but unfortunately it didn't.

The club hails from around the Gosford, Toukley area. The club is on air every Tuesday night and just recently has started a group called 'Camp Breakaway'. This camp is located on a block of land at San Remo, which was kindly donated for use by the local electricity commission. The camp is for the handicapped to enable parents, relatives etc., to have a break from their usual responsibilities. The organisers state that all people involved are quite capable and all the handicapped will be in good hands . . . more information, I hope, will be available by next issue.

★ ★ ★

If anybody is a mad Commodore computer buff out there you will be happy to know that there is a BBS (Bulletin Board Service) owned and operated by an ardent UHF operator. The BBS is called Palintir and can be operated with your computer and modem by dialing (02) 451 6576.

The system is also used by many other 27MHz and UHF operators from all over Sydney, that have the same interest in computers.

The SYSOPS (system operator's) name is Steve Sharp and he will be glad to help with any enquiries. The system operates 24 hours a day and is relatively easy to work, even if you haven't used your modem that much before. If you haven't got a modem, get one, you'll have a ball.

★ ★ ★

That's about it for this issue. Next issue I hope to give you an idea of the cost of general CB repairs around Sydney.

It seems that there are a great many dealers overcharging the unsuspecting CB owner. A list has been organised by me to inform you of the costs quoted by the various CB shops. A great deal of this list has already been prepared and I will abbreviate it as much as possible using some simple fault methods, the cost of the replacement parts and also the average cost of labour. At this stage I'm not sure what example will be used, but I'm working on it.

Thanks again for the letters and please keep them coming — as I said, this is your column, Sydneysiders, so without your news and views this column wouldn't be called Sydney Scene. PO Box 40, Gladesville 2111 is the address. As soon as you put this magazine down, start writing, I need your letters before the end of the first month this issue hits the stands.

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D	B	W	L	C	M	Z	Y	**I**	W	H	V	T
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The winners will be notified by mail prior to the publication of that issue.

I believe that the hidden words are:

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2. Mobile One ..... 2 words (9)
3. ECHOTONE ..... (8)
4. POWER BASE ..... 2 words (9)
5. ..... 2 words (12)
6. ICOM ..... (4)
7. Delta Base ..... 2 words (9)
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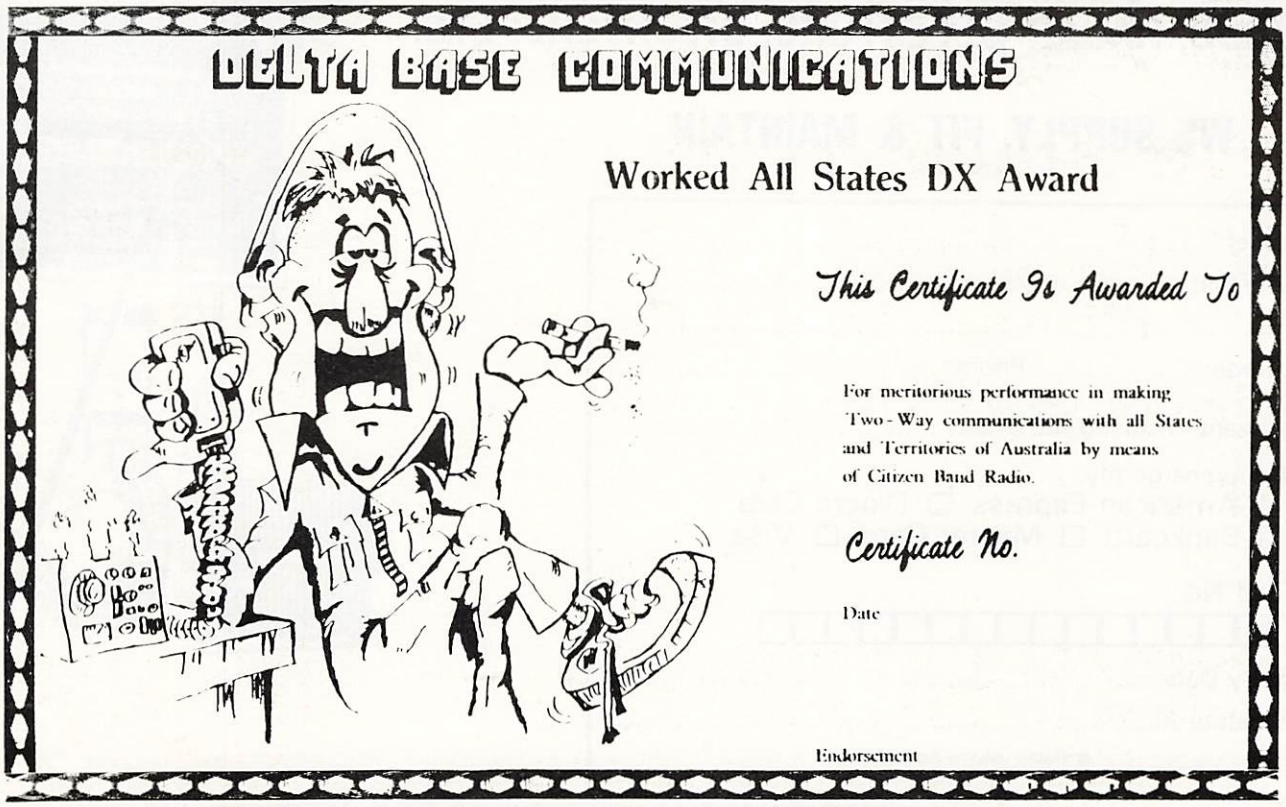
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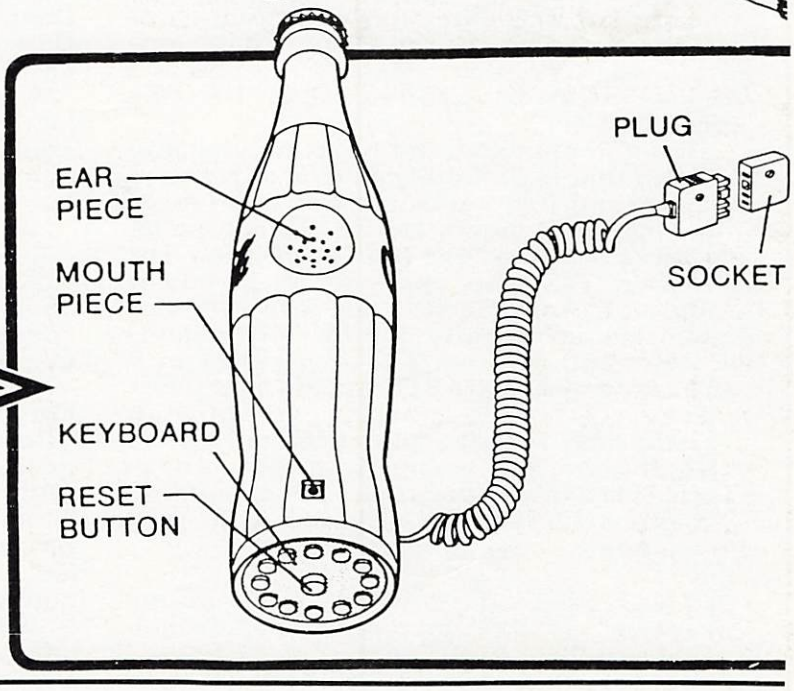

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OUT WEST

By Don Stewart

I don't like having to disparage things said by other scribes, especially when we are supposed to be on the same team, but I can't let Rod Fewster get away with calling me a grass and a dobber. Yes he did, in the last issue — only by inference, but that is enough.

Come off it Rod, surely you don't still believe that "Never dob anyone in" rubbish — it went out with button-up boots in a bygone era. Away back, when it was a case of the poor against the troopers and the squatters, it had some value, but even then it was supposed to apply to mates, not everybody.

Sure, there are limits. I know people who have extra channels, extra power, 'Ham' gear and so on, and they are quite safe so far as I am concerned — let the RIs find them if they can — but if some loud mouthed cretin tries to take the enjoyment out of my hobby, and I get a clue to his identity, I will dob him in so fast you wouldn't believe it. I've done it before and don't feel the least bit guilty about him losing his gear — he was warned.

Giving a clot like that a mouthful of the same stuff in retaliation only adds to the on-air garbage and makes the stirrer's day complete — he has been trying to rile you and your retaliation proves that he has succeeded.

"Half a pool cue up the nose" is vigilante stuff and that is definitely O-U-T out. I have always found that vigilantes end up in more strife than their victim should have copped. Like the chap who was fed up with the TVI caused by "That CBer up the road", so he got in one night and cut his coax into bite size chunks. He paid a hefty fine for 'Wilful damage', etc, and still had TVI — turned out it was caused by a faulty SEC transformer nearby. Fact.

It is so easy to make mistakes, and a chap with half a pool cue hanging from his left nostril is hardly likely to accept a simple apology. He might even feel like returning your pool cue via another well known orifice.

★ ★ ★

If I had expected a flood of replies to my request for an FM circuit diagram (last issue), I would now be feeling somewhat let down. I only received two letters and both of them were along the lines of "Please send me anything you get, because I have the same problem." Sorry fellers, it looks like we will have to buy some commercial stuff.

What seems like our best prospect is a little unit called a FIRELERT DS101, which is handled by Imark (167 Roden St, West Melbourne). Their agent in WA is having a crystal cut to our Fire Brigade frequency and will then lend me a unit for evaluation — I will give you a report next time.

The unit is only a small scanning receiver, so will not give an alerting beep, but it will hear everything coming from the transmitter. From the brochure, the set it about the size of the popular UHF handhelds, weighs 250 gm, will scan up to ten channels (your choice of crystals), or be fitted with only one crystal if you wish. It comes complete with battery charger and carry case and the price is a pleasant surprise — definitely not in the "arm and a leg" department.

I did not want to even mention this before testing it myself, but the hot weather is coming up fast and those who are interested might like to do their own testing before the fire season is upon us. I hope it works out OK.

★ ★ ★

There is another repeater operating in WA. (Repeater List editor, take note). It is located at Kellerberrin and uses channel 1/31 with the callsign KLB 01.

I believe it was put up by a group called the Central Wheatbelt UHF Repeater Group. Congratulations to the group, you have filled another blank spot.

My report that Manjimup might use 6/36 has suffered a change. It was found that this could clash with Margaret River, so Manjimup now has channel 8/38. It's not up yet, but I hear that moves are being made.

★ ★ ★

I had an interesting evening with Philips WA a while back when they invited a few scribes and UHF group representatives to inspect the new FM 620 and discuss UHF generally.

One thing that I picked up was that their FM 320 was not developed with the average CB enthusiast in mind. Philips went into that deal, at a cost of about five million dollars, with their sights fixed firmly on the farm and small business market. Can you imagine anyone putting that sort of money into developing a CB radio medium just for a few keen hobbyists? Not likely.

Philips sold about 70,000 FM 320s and you can bet that at least 75 per cent of them went to people who had no interest in CB as a hobby — some may have developed an interest since, but that is beside the point.

Armed with this information, I did a bit of thinking (I do that sometimes) and came up with this:

Most of the UHF repeaters seem to be owned, or controlled, by people who either use them commercially or make money from

the sale of UHF sets — so what would happen if all the commercial users were shifted to another set of frequencies? Most of the repeaters would go with them, is what.

All you commercial knockers out there should keep a couple of points in mind:

Without the commercial side of it, we probably would not even have a UHF hobby band worth talking about.

Without the commercials, we would have very few repeaters. How many of the knockers own, maintain, or even contribute to a repeater?

I agree with those who say that commercial concerns using more than, say, six mobiles, should move to commercial two-way and they should not even have an option if they want to use scramblers. Most of them shift anyway when they get sick of the CB hassle, but let's try to get along amicably with the rest of them.

Remember that repeaters are intended for brief mobile to mobile, or mobile to base contact — they are not there for hour long waffles about how the budgie fell of its perch when little Billy said his first word and grandpa's gout has moved to his elbow — "after-hours" waffle is a bonus and we should be glad to have it.

Hands up all those who would like to go back to the days of UHF before repeaters, when you could waffle all day to your mate up the street without hearing a breaker. In fact, he was probably the only station you could copy.

★ ★ ★

Another thing that came from the discussion with Philips, was a reason for their use of a folded dipole antenna on repeaters.

No — not to push the signal more in one direction and exclude some areas, as I have heard suggested. They use two folded dipoles back-to-back with a phased harness — this gives a virtually omni-directional pattern with about 3 dB gain.

No — not to restrict the range so you don't get too many users crowding the repeater. Let's face it, the whole idea of a repeater is to get the best saturation effect in the city, as compared to the dipole.

Another reason for not using a vertical rod antenna is lightning. The dipole is all aluminium and is grounded to the mast, so a lightning strike would run straight to earth whereas a rod type antenna can carry a strike down the coax cable to the transmitter. 'Nuff said.

The guys who work all this out are top drawer engineers who pick up their pay packet with a wheelbarrow, so I am not about to argue with them.

★ ★ ★

Channel 3 repeater was off the air again for a few days recently and there was no end of conjecture as to the reason — I even heard it said that Philips had shut it down to punish the ratbag element.

The reason for this shut-down was quite simple — it had to be switched off, along with several other services, while a new system was added to the mast.

Where you have a lot of repeaters and other transmitters on one mast it is quite a feat of engineering to get everything positioned and tuned so that no transmitted signal beats with another or interacts with any receiver on the mast.

Once a balance is achieved, everything chugs along smoothly until somebody wants to put in another antenna, then the juggling act is on again.

So channel 3 is back on air — possibly not in the same position it used to occupy on the mast, but working nicely anyhow.

★ ★ ★

After so many years with our gentlemen's agreement as to AMers staying on the low channels, one would expect that DOC might come to the party, or at least let sleeping dogs lie. No such luck.

Their letter (Log Book, page 9 of the last issue) says quite plainly, "We don't give a hoot for your attempts to introduce some co-operation and sanity to the band — get in there and fight." Oh, well. So much for self-regulation. Still, I guess I can always turn it off if things get too bad.

★ ★ ★

And on that note I will depart. Pleaase, keep the letters coming to BR 282 Don, PO Box 31, Bunbury 6230, or phone (097) 25 1284.

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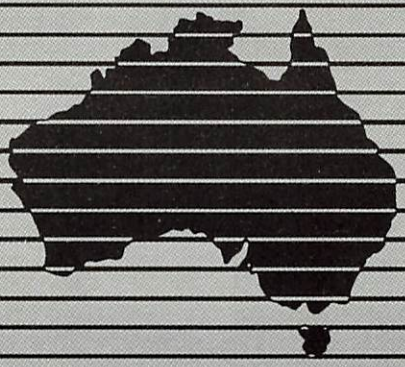

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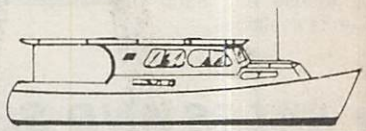

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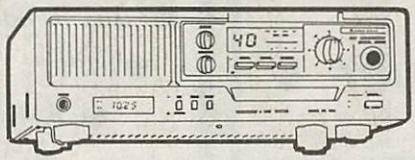

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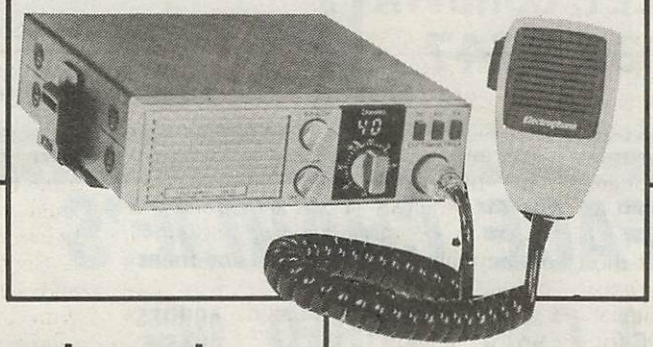

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UHF REPEATERS -7 YEARS ON

Australia's first public access UHF CB repeater was activated in early November, 1979. It was the weekend prior to the Melbourne Cup, but for the UHF CB enthusiasts of the Victorian capital, the days brought with them a different kind of excitement.

At Lysterfield, in the foothills of the Dandenong Ranges, Philips had erected a 477 MHz repeater, under a special experimental licence issued by DOC for the weekend's activities.

Without the benefit of an established repeater band-plan, the Philips unit was made operational on ch. 1/39 (output ch. 1, input ch. 39). This provided the greatest practical channel separation, and was a split easily obtained on the FM-320. It also bred fast reactions in UHFers, who needed to deftly switch between channels to receive on Ch. 1, and transmit on Ch. 39.

Stations that had never before been heard, were suddenly making new 'on-air' friends throughout the greater Melbourne metropolitan area. Even a marine mobile station off the north coast of Tasmania — almost 300km distant — made the trip with a "full quieting" signal.

The Philips 1/39 repeater was, to UHF operators around Australia, a sign of things to come. And there is no doubt that this first experience of UHF CB repeaters will stay long in the memories of those Melbourne enthusiasts who were taking part in the introduction of an exciting new facet of the 477 MHz CBRS.

It is now almost 7 years since that weekend, and there are over 100 UHF CB repeaters across Australia. They are the result of efforts by a variety of groups — companies large and small, local public associations, emergency groups and radio clubs.

Repeaters have, indeed, added a new dimension to the UHF CBRS.

This article is an evaluation of those seven years — what they have achieved and what still lies ahead.

EARLY DAYS

Upon the introduction of the UFH CB service in 1977, the possibility of repeaters was quickly considered. Their viability throughout the amateur service, especially on the nearby 70 cm (430 MHz) ham band, proved that it could, perhaps, be done.

The public debut of Melbourne 1/39, however, made the 'possible' into 'probable', and demanded that the viability of 477 MHz repeaters be given serious thought.

The most immediate debatable issues were those of cost, and 'jamming'.

To begin with, it was asked, who was to pay for repeaters? Surely not DOC! And what clubs could afford a bill for anywhere from $1000-$5000? Even if they could, wouldn't they want 'their' repeater to be available only to club members and other 'approved' users, with tone-encoding devices and a 'private' repeater system?

Neither, it was maintained, was 'the industry' about to spend up big — at least not in 1979, with 477 MHz still being very much a fledgling service.

Secondly, the potential for ratbags and jamming was to be contended with. Just a few such operators could render the very best repeater totally useless. Similar problems on amateur repeaters had been proof enough of this.

Unfortunately, time has not provided us with an answer to this problem, and the usefulness of most repeaters (in larger cities, at least) swings from 'excellent' to 'totally unreliable', depending on the mood of local operators.

As to the first observation, the development of Australia's UHF CB repeater network has seen the list (and variety) of repeater 'sponsors' — those groups who erect and maintain a unit, mostly at their own cost — grow beyond initial expectations.

Industry-sponsorship has been led by Philips, who are responsible for 9 repeater stations installed around Australia, covering most capital cities with two per city. This is excepting Canberra (one only), and Hobart (where, as yet, the only repeater is CREST's ch. 1/31).

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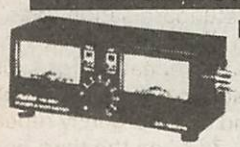

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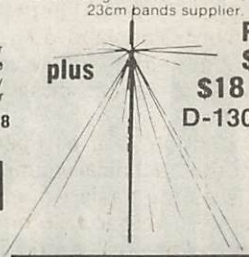

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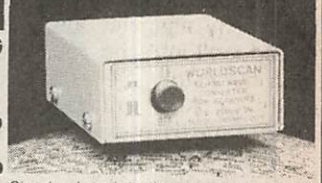

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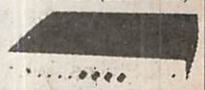

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UHF REPEATERS -7 YEARS ON

Of the 100 or so UHF CB repeaters in operation, almost half of these are sponsored by industry. The extent of this sponsorships ranges from the local radio store providing a unit for its own area (normally in a regional area), to capital city repeaters such as Melbourne's ch. 7/37 (by Power Band Communications).

Another important element was the 'repeater association' — again, a predominant force in establishing repeaters outside metropolitan areas. Utilising the UHF operators of the local area (both hobbyists and commercials), such groups provided funds and know-how to bring the benefits of a repeater to the entire community.

In many associations, this has extended well into the very character of the local district. Service groups (such as Rotary, Apex and Lions), volunteer coast guard and civil emergency groups, even the Salvation Army — the combination of UHF CB and repeaters provides the simplest and lost efficient form of two-way communications available to the community at large.

The repeater sponsorship list also includes emergency groups such as ACRM (providing ch. 5/35 repeaters in Adelaide and Brisbane), and even selected clubs such as Melbourne's Omega Radio Club (with MEL 99, the Victorian portable repeater). Interestingly enough, the basic unit for MEL 99 (an FM-828U mobile radio) was donated by Philips, who always seem to be behind the hobby in the best ways.

As repeaters become more widespread, and groups such as farmers and smaller local townships take to UHF CB, community-based repeater associations will continue to play an active role in the CBRs.

Of course, back in 1979, repeaters were still a largely unknown quantity. 'Would the Philips 1/39 repeater be a one-off experiment?', was the question many enthusiasts dared not ask.

What began as a trial-run attitude, quickly took shape into defined policy. 1/39 proved so successful that Philips applied for extensions to the temporary licence, and began planning submission to DOC to establish UHF CB repeaters as a permanent part of the service.

1980 saw further development. The 'UHF Repeater Group' was founded in Victoria, to assist in the lobbying. This was later to become the CRRA — Citizens Radio Repeater Association — and, together with Philips, shaped the future of 477 MHz repeaters.

In September of the same year, another experimental repeater went to air. Again, it was backed by the industry — this time, Imark (importers of the Sawtron radios).

In providing communications for the annual Autosport Rally, held in the forests of the West Gippsland area, the Omega Radio Club were well aware of the difficulties the region posed for two-way radio.

The best solution was a repeater, using a pair of the 'technically superior' Sawtron 880s as the basis for such a unit. Imark, and Powerband Communications, came to the party, and DOC issued a weekend permit for the device.

Mounted atop a Forestry Commission tower, the repeater (callsign AX3F33) was invaluable to the smooth running of the rally. It was also enjoyed by local UHF operators during official breaks in the rally (who, with great courtesy, kept off the repeater during the running of the event).

Again, it had been shown that UHF CB repeaters promised great benefits, and could be made to work for the good of all UHF users. Later that year, Imark installed a similar system under licence at Mt William (central Victoria), which operated with much success over the Christmas period.

Already, through submissions to DOC during the 1980 CBRS Review, support for repeaters was clear. Following upon this came the Philips repeater submission. This was, undoubtedly, the strongest card in the game.

The Philips submission formed the basis for repeater guidelines that still apply today. Their proposed bandplan entailed a system of eight paired repeater channels. Outputs were to be channels 1-8, and inputs were an out-of-band allocation from 3 — 5.2 MHz distant.

The most outstanding aspect of Philips' submission, was their offer to provide two repeaters in each capital city, at no charge. This promise, of course, has since been carried out almost to the letter.

At the completion of the CBRS Review, one of the major decisions (which included the expansion of the 27 MHz service to 40 channels), was the apprval of requests for UHF CB repeaters. The date was December 10th, 1981.

The BANDPLAN

As UHF CB had been almost 'under the wing' of Philips since its infancy, it was not unusual that the company's proposals would be readily adopted.

DOC had already produced two draft plans for repeaters, including technical specifications, licencing requirements and operational procedures. These had also ear-marked the Philips out-of-band offset system as a long-term arrangement.

As an interim measure, our current eight channel in-band plan was created. The longer-term option required that 'offset frequencies . . . be determined and cleared of existing services'. Target date for implementation was late 1985.

The day following DOC's repeater announcement, the CRRA committee met with departmental officers, and were requested to submit a repeater band-plan, for the allocation of channels to repeater areas.

The CRRA scheme was quickly presented to DOC. It detailed some 120 'primary' repeaters throughout Australia, in cities and regional areas. Furthermore, provision was made for repeaters in remote locations, and (with great foresight) allowed for anomolies such as farming communities who may require a repeater.

The plan catered for a total of 250 repeaters, and DOC officers agreed 'in principle' with the bandplan.

One of the most noticeable aspects of the CRRA plan was the allocation of channels 1/31 and 3/33 to all capital cities. This standardisation was built upon when DOC approved three general purpose repeaters for such cities (as opposed to the initial limit of two such units and an emergency repeater), allocating ch. 7/37 as the third primary channel.

Since then, however, it appears that the CRRA bandplan has gone out of fashion, as the interim plan grows more entrenched with each year that passes.

Apart from the three city repeater pairs and the ch. 5/35 emergency repeaters, channel allocations have lost any semblence of a defined plan. They have, in fact, developed into an 'ad hoc' system where repeater channel assignments seem to be a day-to-day matter, with any resemblence to an over-all plan or design being purely coincidental.

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UHF REPEATERS -7 YEARS ON

As may be noticed by examining the 'Australian UHF Repeater List' in this issue, the bandplan is bottom heavy; it clearly favours the lower channels. Take, as your example, the list from the last issue of CBA.

There are 102 repeaters in evidence. Of these, 21 (over 20 percent) are ch. 1/31 allocations. Ch 2/23 holds another 20 percent; ch 3/33, 16 percent from here, as the channel number increases, the number of allocations falls — to 9 percent, for ch 7/37, and only 3 percent for ch 8/38.

This may seem to be a needless play with numbers, but it confirms DOC's method of 'planning' for repeater allocations.

Simply put, they start at the bottom and work their way upwards. First choice is ch 1/31. If this is suitable, then it is allocated. If there is too great a chance of interference with a nearby 1/31 unit, then 2/32 is considered . . . and so on, until ch. 8/38 is reached. Except, by then, a satisfactory channel has normally been found.

At the outset, this may appear to be an adequate allocation system. And, in a limited-growth, short-term environment, so it is.

However, at this point in time, the day-to-day method has bred inflexibilities and restrictions that are only now starting to become evident around the outer-metropolitan and near-regional centres. The limit of seven repeater channels (excluding 5/35) is slowly emerging.

It is most unlikely that these pressures will be felt in anywhere but the heavily-developed population areas. Certainly, the first to notice these effects will be the operators around Brisbane, Sydney and Melbourne.

REPEATER SYSTEMS

Australians may consider themselves fortunate in that they are at present the only country where CBRS repeaters are allowed. This is discounting the American GMRS (462/467 MHz), an essentially single-channel service that is as far removed from the general concept of citizens' band radio as is the Japanese high-tech 903 MHz system.

So, being 'pioneers' in the loosest sense, just how far can 477 MHz repeaters progress? The most logical position has already been reached in some regions, and we may take Sydney as an example of this.

Like most capital cities, Sydney maintains the basic framework of UHF CB repeaters — the three general-useage channels.

Observing the difficult topographic and demographic structure of the greater Sydney region, these repeaters have very clearly defined coverage of certain 'territories'.

To the south, ch. 1/31 (Hurstville). North of the harbour, ch. 7/37 (Willoughby). The larger part of the sprawling western suburbs is likewise the domain of ch. 3/33 (Prospect).

There are, of course, very large overlapping areas, for both mobile and base stations, and also a few 'black holes' to be avoided. But, for most concerned, it is a pleasing and efficient layout.

The population spread to the outer-west and outer south-west has also led to the need for 'local' repeaters, to cater for areas on the fringe of the established network.

At the time of writing the Blue Mountains ch. 2/32 repeater provides coverage of this outer-west, whilst an additional repeater for the south-west cannot be too far away.

It can be seen that, in time, Sydney UHF enthusiasts will have access to a comprehensive repeater network that will no only span the entire city, but link it with the more outer-lying areas.

The concept of regional repeaters can also be demonstrated with reference to Sydney. The major city to the north — Newcastle — is home to two repeaters, ch. 1/31 and 6/36. The advent of a repeater for the southern city of Wollongong is also on the not-too-distant horizon.

Thus, with the needs clear and the coverage zones recognised, it may be seen that — in this scenario at least — Sydney and her neighbours may be among the first to realise the constraints of the adopted planning procedure.

As such networks develop, they can be seen to mirror the pattern of amateur radio repeaters on the 70 cm (430 MHz) UHF band — and, although to a lesser extent, the more populated 2 m (144-148 MHz) and VHF repeaters.

In fact, Sydney's 70 cm repeaters show almost identical coverage zones, and have some sites very close to their 477 MHz cousins. There are UHF amateur repeaters for the southern and western suburbs, and other services for the Blue Mountains, Newcastle/Wollongong, and the outer south-west.

Owing to the size of the 70 cm band (from 420-450 MHz, accommodating two amateur TV channels!), there are some 58 UHF repeater channels available for use.

These have inputs from 433.025-434.975 MHz (25 kHz spacing), with outputs at 5 MHz above.

Allocation of these channels falls to the Wireless Institute of Australia (WIA), the recognised body of amateur radio in our country. The state divisions of the WIA utilise their own Repeater Committees to co-ordinate and assign repeater channel allocations within each state.

The same practice is held with the 31 available 2 metre repeated channels (146-148 MHz), split of ± 600 MHz depending on channel number), and the eight 6 metre channels (53-54 MHz, + 600 kHz split).

State allocations conform to national bandplans drawn up by the WIA, which recommend specific uses for 70 cm repeater channels. This includes a national 'primary' channel (output 438.525 MHz, known as ch. 8525), which is the metro repeater in each capital city; secondary and portable/emergency channels; 'data' channels (for radio-teletype repeaters); and a series of repeater channels with no mandatory use, to allow for flexible allocations beyond the norm.

The role of the WIA in overseeing repeater applications, a task that the DOC has (like others) passed over to the Institute, is a sore point amongst many amateurs. It is certainly preferable to the American system, where the choice of repeater channel rests with the sponsoring club itself, and sometimes leads to ignorance of the need for adequate (or even cursory) co-ordination of repeater allocations.

The growth of repeaters on both the 2 m and 70 cm amateur bands has been the main cause of the increased popularity of each band in recent times, and the WIA must obviously take credit for their plans and efforts in this field.

Has any group ever attempted likewise, in the UHF CBRS?

THE CRRA

The period of late 1981 to mid-'82 was almost a renaissance for CB radio enthusiasts. The gap between the demise of the monthly 'CB Action', and its resurrection in January 1983 as a

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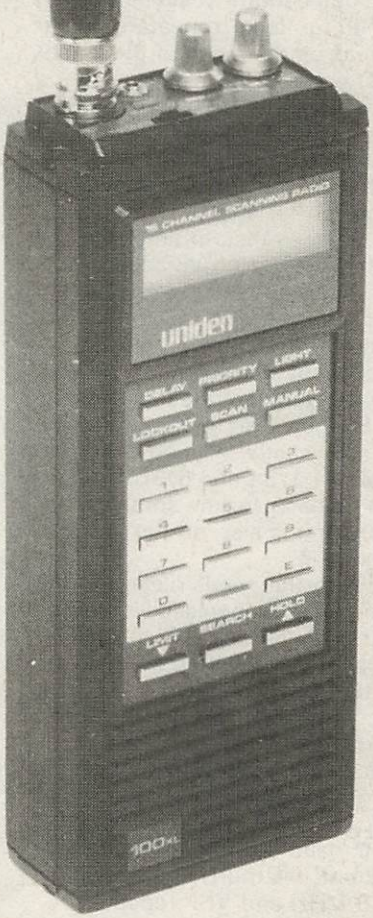

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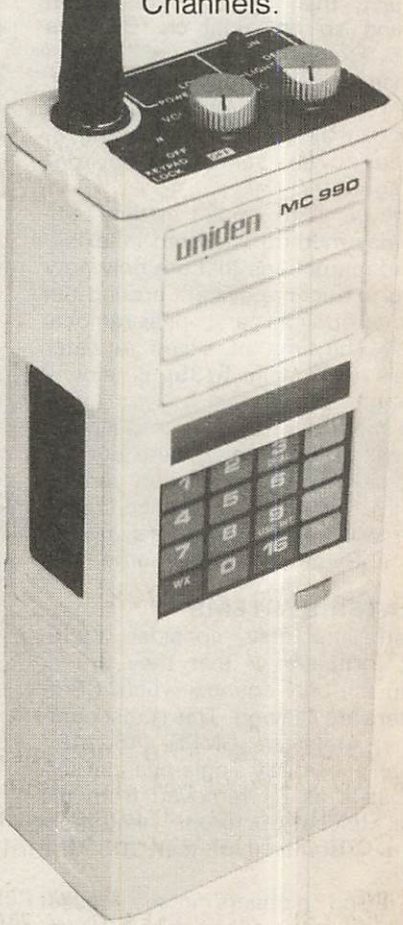

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Santronic

UHF REPEATERS -7 YEARS ON

quarterly publication, was filled by the exciting (but short-lived) 'CB Focus', a monthly mag which re-united some of the 'old team' from CBA, and added a few new twists.

27 MHz was getting back some of its original character (and characters!), as it settled down from the last remnants of the stop-start booms. With the CBRS Review about to give approval for 40 channels (until then, we'd made do with 18), and the 'good word' that beams were soon to be legalised, things were looking great!

477 MHz, meanwhile, had found its feet, and was becoming more popular by the week. Buying a UHF CB was still a 'three-horse race' — FM320, Sawtron 880, and the Apollo AP400. Emtronics were to release the Emtron 470, a 6 ch handheld, and Standard's 'Electrophone' mobile UHF rig was rumoured to be on the way.

Clubs were being re-established, and there was a general mood of optimism surrounding the hobby. Under the newly-formed Emergency Monitors Council of Australia (EMCA), co-operation at the highest levels of monitoring groups (such as CREST, ACRM, Redlight and smaller independent bodies) began to seem a reality. EMCA also hoped to integrate volunteer coast guard services and others into a cohesive emergency monitoring system — indeed, a 'brave new world' for CB.

Part of this mood was the likelihood of repeaters for UHF CB. Philips' generous offer, the incredible acceptance of 477 MHz by enthusiasts, small businesses and whole communities — it was in this atmosphere that the young UHF Repeater Group (URG) was re-organised and assumed a higher profile as the Citizens' Radio Repeater Association.

The CRRA was a group with a wide base, including the support of Philips itself, and set three aims.

Firstly, to 'promote, on a widespread basis, the introduction of a permanent repeater service'. This included setting 'technical standards and channel plans . . . so that the service can be introduced in an orderly fashion to provide optimum coverage in as many areas as possible of the Australian continent'.

Secondly, to 'provide an advisory service to groups of people who believe they have a need in their area for a repeater service'. An important part of this was the CRRA's plan to make available 'fully-licensed temporary repeaters . . . to allow potential applicants for repeater licences to demonstrate to the community in their area the advantages of a repeater system'.

These temporary units were also to be used for emergencies and sporting events.

Interestingly, the Omega Radio Club's MEL 99 portable repeater has proven the worth of this concept. It has been used to promote the establishment of repeaters in areas such as Gippsland; to provide the heart of efficient communications network for car rallies; and, in a sterling performance (cut short by jealous members of the civil emergency service), was put into action during the 1983 Ash Wednesday bushfires.

The CRRA also intended to advise repeater associations on all aspects of their task — from finance, siting and community liaison, to licencing.

Using their portable equipment, the CRRA also hoped to provide 'continuity of services' if an established repeater was discontinued due to reasons such as lack of finance or loss of licence.

The third and final aim of the CRRA, was similar in design to that of the WIA's Repeater Committees. This was to 'co-ordinate (licence) applications to the DOC and ensure that duplication and overlapping of services does not create interference in adjacent areas, but in fact provides an optimum technical and operating solution for their area'.

This objective was soon passed over, but the CRRA increased its emphasis on being an advisory organisation, to both UHF users and the DOC.

The CRRA was intended to operate on a national basis, and was recognised by the NCRA (then in its dying throes) as the representative UHF body. It was also to act on behalf of the EMCA, for the establishment of ch. 5/35 emergency repeaters throughout the capitals.

With such a bright future planned, whatever happened?

To most, the CRRA simply disappeared. This is a pretty accurate description of events — in that the most public, wide-reaching face of the CRRA (CB Focus magazine) went 'out of focus' after 6 issues, just as 477 MHz repeaters were being established.

Without the coverage supplied by CBF, not being able to reach UHF enthusiasts on the national scale that their column and reports in the magazine provided — the UHF CB fraternity had to make do without them.

The essence of the CRRA remained in Victoria, their program to be continued by the Omega Radio Club (which shared many 'guiding lights' with the CRRA), until the Association was officially wound up early this year. In other states, Philips took the lead in a quiet but effective way. Local retailers were also quick off the mark. Once things had settled down, the local repeater associations began their roles.

But the national aims of the CRRA were suddenly beyond reach, taken over by events that refused to wait for anyone. Their legacy belonged to the UHF clubs that were to follow.

UHF CLUBS

With the growth of the band, came the concept of the UHF club. A group dedicated to 477 MHz, promoting the development of repeaters where possible, spreading information, attempting to foster friendship amongst operators.

This began with the Victorian UHF Club, although the true scope and potential of such groups has been demonstrated by the Omega Radio Club. This Victorian body has long been associated with all things UHF, both the club and many individual members having played no small part in the popularising and subsequent success of 477 MHz (especially repeaters).

Likewise, the more recently-founded 'UHF Association of Western Australia' has made inroads for our western 62 cm 'cousins'.

The very nature of UHF CB — with such large concentrations of operators in cities and regionals, and repeaters following these trends — has made state-based UHF groups an important part of the service.

The relations of each group towards their respective state DOC offices, industry representatives and local operators, are good. Certainly, state groups can be seen to be implementing the very aims of the CRRA at their own level.

Such matters as repeaters are, after all, very localised considerations, and the accurate knowledge of such requirements is a strength of state clubs.

Having now established themselves, what are possible future roles for these and other UHF groups?

Only recently realised by some has

been the acceptance of UHF CB repeaters by farmers and outback stations. Repeater installations in such areas are, as predicted in the past, becoming a firm reality. The present problem, likely to continue, is that most such 'sponsors' see these as being essentially 'private' repeaters.

One can easily appreciate this point of view. After outlaying thousands of dollars on handhelds, mobiles, antennae and cable, the whole lot is linked up through another few grands' worth of repeater.

The farmer has a two-way system of exceptional range and high quality, erected by them to meet their own need — and suddenly some stranger in town (or a few of 'em) appear on channel as if it was public property!

There is also the continuing fricition between hobbyist and commercial UHF operators, on both repeaters and simplex channels.

UHF clubs can, if prepared, adopt an advisory and promotional role, encompassing repeaters and the UHF CBRS itself.

The future development of both UHF clubs and local repeater associations, and working relationships with the DOC and industry, can realise the potential force for good that they represent for the entire UHF service.

The UFHAWA and Omega Radio Club have already become accepted by DOC as the representative body for their state. Utilizing their position, state UHF clubs can also help to promote repeaters. With the appropriate advice and support, 'repeater establishment kits' (as compiled by the CRRA) can be produced, for use by potential repeater sponsors. These could detail repeater theory and operation, cost, financial options, siting and licencing, and other aspects that many sponsors are unfamiliar with.

A logical step beyond this is the acquisition of a licensed portable repeater, which can be used for demonstrations and site trials by repeater groups.

This has been carried out by the Omega Radio Club, whose portable Victorian repeater MEL 99 has been 'surrogate mother' to repeaters at Gippsland and Moe.

477 MHz — THE YEARS AHEAD

As far as our present UHF CBRS is concerned, what does the future hold, for repeaters and the service as a whole?

Rumours persist that DOC is working towards the introduction of 80 channels, or moving the repeaters to their envisaged long-term home out of the band.

In seeking improvement to 477 MHz, those are in fact the two camps that have formed.

Those seeking extra channels, point to the crowding of the present allocation. Their lobby is for the increase promised by Liberal Minister for P & T Tony Staley, made at an NCRA convention in 1978. This was towards 80 channels, presumbly an extra 1 MHz directly above the present band — creating channels 41-80 with full compatability with existing radios.

An off-shoot of this, and slightly less demanding, calls for 60 channels (allocated in the same manner). Nevertheless, possible expansion does not have to be simply a matter of 'going upstairs'. A draft plan from DOC, which appeared in the Jan 1983 edition of CBA, proposed a complete re-shuffle of the band, with additional channels both above and below the present ones. The total was still 80, but our current ch. 11, for example, would become ch. 35! As a matter of interest, this plan was smartly canned, never to be seen again.

As far as the repeater lobby is concerned, the implementation of the long-term plan ASAP is called for, accompanied by an increase to 10 repeater channels (with inputs from ch. 1-10).

The extra 2 repeater channels, it is claimed, would give relief to planning difficulties in high-congestion areas. A fringe benefit of this plan is that it would increase the effective number of simplex channels. How so?

Moving inputs out-of-band would free the old input channels (31-38) for simplex use. Even discounting the proposed use of chs 9 and 10 for additional inputs, this still represents 6 more simplex channels, which can be useful in crowded cities.

This option, to many UHFers, presents the best immediate solution for both repeaters and channel crowding, and it obviously would be easier for DOC to implement than direct expansion of the band.

However, the word from DOC is at odds with both groups' ideals. The current mood is that our interim short-term plan (as currently used) is here to stay. UHF CB repeaters have grown so fast that changes to the system at this point would cause great inconvenience. Of course, this problem will increase with every new repeater commissioned and new rig purchased — another infamous 'Catch 22'?

A large degree of the channel crowding, it is maintained, can be attributed to operators (mostly commercials) who sit quietly on **their** channel, but jump on anyone else using it. Not all commercials are so ignorant, but the example they set isn't always followed.

It will take user education and patience (mixed in equal parts) to alleviate this problem, or even hold it at bay, as more people appear on UHF.

There is, then, no plan from DOC to change any aspect of the UHF CBRS.

In fact, there is a bit of pride at DOC in our uniquely Australian service, and the way it is working. I think most **true** UHF enthusiasts can relate to that, and I — for one — hope they are looking towards keeping 477 MHz worthy of that pride in the years to come.

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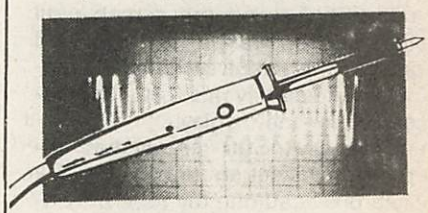

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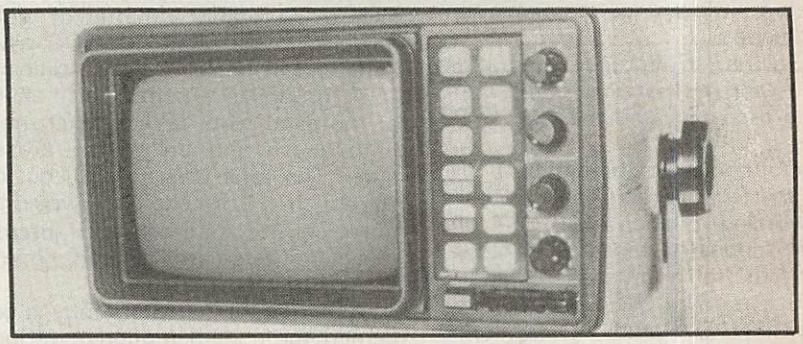
NEW FROM HATADI

Soon to be released is the Hatadi Pearce-Simpson Cub 40 channel AM only rig. The Cub is a budget AM model with all the latest features, including finger touch "up/down" channel selection, channel 9 selector, PA switch, and automatic noise limiting switch.

The Cub measures 130mmW x 30mmH x 175mmD, with an attractive black front panel, and LED indicators. It is priced at $139.94 RRP, and with it's state of the art technology will make an affordable alternative for the first up CB buyer.

Check out a Cub at your local Hatadi Pearce-Simpson dealer, or call the Hatadi Pearce-Simpson Communications Hotline on (02) 99 1229.

DM-1500 UNDERWATER VIDEO SOUNDER



Imark Pty Ltd have released the Sunmaster DM-1500 Video Sounder to replace the popular DM-60 Video Sounder.

The Sunmaster DM-1500 Video Sounder is a 160 Metre (525 ft.) compact, lightweight depth sounder which utilizes a 6" CRT screen instead of the usual 4" chart paper to display the sea bottom, reefs and fish beneath the vessel. Thus, it is not necessary to buy chart paper.

The DM-1500 has six basic depth ranges as follows: 0-10, 0-20, 0-40, 0-80, 0-160 and 0-320 metres. (0-320 metres on 50 kHz model).

A "zoom" facility enables the operator to zoom in onto any 5 metre section of the displayed range by halving the screen until the desired range is displayed across the entire screen. This action immediately multiplies the resolution of the display.

The DM-1500 display has improved resolution with a 160 x 128 pixel cathode ray tube providing a much improved display. The DM-1500 also has a "freeze frame" facility which enables the screen to be "frozen" to allow careful study of the information. It also has a "synchronised" sweep speed which automatically synchronises the sweep speed with the speed of the boat through the water.

The DM-1500 has an electronic alarm facility and provides both a shallow and a deep alarm. These settings are displayed on the CRT also. These alarms can be set to sound when the depth of water becomes deeper than the deep setting and/or when the water becomes shallower than the shallow setting.

The DM-1500 is supplied with a "tri-transducer". This transducer includes a speed & log facility and a water temperature sensor. The speed, log or water temperature can be selected by pressing the appropriate key on the control panel and are displayed on the CRT.

The DM-1500 control panel is backlit for night use and is easy to operate. It also includes controls to select the sweep speed, to impose a screen over the CRT display as well as Gain, Shallow Alarm, Deep Alarm, Screen Brightness and Power ON/OFF. The CRT even displays the battery voltage.

The DM-1500 Video Sounder operates from a normal 12 volt battery and draws only 1.5 amps. Dimensions are only 135mm (H) x 205mm (W) and the weight is 2.5 kgs. The DM-1500 is supplied complete with DC cable, Mounting Bracket, Sun Shade Hood, Vinyl Cover, Operates Manual and Transducer.

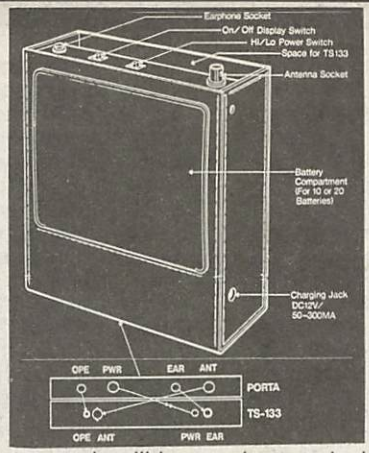
Further details can be obtained from the importers, Imark Pty Ltd., 167 Roden Street, West Melbourne, Vic. 3003. Ph. (03) 329 5433 Tlx. AA37753 "IMARKO". or Perth Ph. (09) 364 9010 or Brisbane Ph. (07) 52 7171 or Sydney Ph. (02) 534 4077.

TS133 PORTA PAK

We mentioned that the TS133 ultra compact UHF rig from Hatadi — see last issue — would soon have a porta pak. Here are the details.

With the porta pak, the TS133 will be the first truly portable 5 watt UHF rig. The unit works with either 10 or 20 batteries and Hatadi estimate that the 20 battery configuration will give up to 14 hours of continuous use. There are two switches on the porta pak — one to turn off the LEDs and so conserve power, and the other a high/low power switch. Low power is one watt. There is also a socket for an ear-piece, and the unit comes complete with a shoulder strap, and antenna.

When fitted with 20 ni-cads and plugged into a wall charger, the unit doubles as a base station.



Both the Royce TS133 and porta pak will be used extensively in the Wynn's Safari which blasts off on 20 September.

See both the TS133 and the porta pak at your nearest Hatadi Pearce-Simpson dealer now, or phone the Hatadi Pearce-Simpson Communications Hotline on(02) 99 1229.

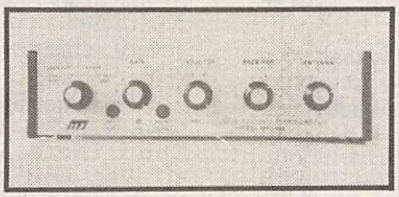
ACTIVE ANTENNA MATCHER

The MFJ-959, made by MFJ Enterprises of Mississippi, USA and distributed by GFS Electronics in Mitcham, Victoria is designed, it is claimed, to meet the needs of our SWLs.

It incorporates an antenna matching unit which covers 1.8 to 30 MHz, a 20 dB adjustable gain preamplifier and two two-position coaxial switches, plus a mode selector.

Most shortwave listeners are faced with the problem of not being able to physically accommodate an antenna for each band they are interested in listening to. Alternatively, it is difficult to obtain a suitable broadband antenna which performs adequately. MFJ has solved the problem by building the MFJ-959 Active Antenna Matcher. With it, GFS claims, an SWL can now use a single random length of wire, which may be of any length that best suits his real estate, and still obtain dipole plus performance over all shortwave bands. GFS says users have reported up to seven S points improvements over using just wire on its own.

The MFJ-959 can provide this performance because it electrically matches the antenna to 50 Ohms,



at the frequency of operaiton, then introduces 20 dB of gain at 50 Ohms to the receiver.

Other facilities on the MFJ-959 are twin coax switches designed to allow the users to select between two different antennas. It also incorporates an additional front panel coax switch which allows the 959 to be bypassed completely, the tuner or matcher section only to be used, the matcher used with the preamp and, if necessary, 20 dB of attenuation to be inserted. Power requirements of the MFJ-959 are nine to 18 volts DC. All input and output connectors are rear-panel mounted and duplicated in both SO-239s and RCA types.

GFS advises that the price of the MFJ-959 is $388 plus $18 freight.

The company also has a nine-volt AC adapter which can be used to power the 959. It is priced at $35. If you would like more information contact GFS Electronics, 17 McKeon Road, Mitcham, Victoria, 3132. Phone (03) 873 3777 or telex 38053 GFS.

UNIDEN BEARCAT 50 XL

A low-cost scanner with more features than many large base station units.

Features include: Direct Channel Access. Enter any channel for instant access, or you can step through each channel individually; 10-Band Coverage. Includes low, high, UHF and UHF "T" public service band, the 2, 6, 10m and 70cm bands; Auto Lockout. The scanner can be programmed to skip any channels not of current interest; Scan Delay. Adds a three-second delay after activity on the channel clears; Track Tuning. Which works right across the band, giving automatic alignment for band of frequencies. Uniden has also released, as top of the range model, the Uniden Bearcat 100XL handheld. The 100XL covers nine bands, including the aircraft bands, and has 16 memory channels. Your priority frequency is checked automatically every two seconds. The keyboard can be locked to prevent accidental programming.

Features include: No crystals; manual step-search; limit — upper and lower limits of search range are programmable. Also used to "step down" through frequencies in manual search; hold — automatically stops on any frequency while searching automatic lockout — skips channels not of interest; direct channel access; track tuning — scanner peaks on each transmission for optimum reception regardless of band; carry case — high quality leather-look vinyl with belt loop.

Contact your Uniden stockist for further details.

Back to You

BUY AUSTRALIAN

In your last issue David Gill made a few comments about the importing of overseas goods into Australia. In the Dealer Profile Column he said that there was no local market for 27 MHz, but I think we Aussies should encourage the local communications industry to produce quality goods for 27 MHz. Philips in particular has shown that they can make excellent products in the UHF market — with the FM 620. If they could produce 27 MHz AM and SSB transceivers, I am sure that they would be in demand. I would certainly buy one.

Finally, I'm glad the magazine went bi-monthly — it means more reading!

Not signed
Baulkham Hills NSW

With the yen going through the roof, and our "Pacific Peso" going down like a wrought iron hang glider, it must just about be at the point where it would be cheaper to manufacture CB gear in this country — and amateur gear for that matter. It would appear to us that the potential manufacturers in this country have not been keeping their ears to the ground, otherwise they would know the vast number of 27 MHz rigs which are sold, and do something about it.

WILD GEESE WANTED

I'm sending this letter to see if you can help, through your CB Action, to get through to the many Vietnam Veterans who are out there, who use the CB Radio or UHF etc. to let them know that the Wild Geese Club would be very proud to have them as members of our club.

If at any stage the opportunity arises where you could let these men know about the Wild Geese Club, that it is only for ex-combat veterans, and that the Wild Geese Club would be proud to have them join. I think it would help their morale a great deal. If they buy CB Action and read it they would know how to contact us and that they would be made welcome, provided they are licensed operators etc. and qualify under the combat regulations.

Hon Sec. W.G.I.
Sylvia R. Farrow.

Sylvia, the jobs right!

DISPLEASED OFFROADER

I am writing to express my disgust at the attitude of some Channel 5 UHF emergency channel volunteer monitors.

I own a 4 wheel drive which is used frequently for recreational activities. I have a wife, a two-year-old son and a nine-month-old daughter who accompany me on these expeditions.

When in the bush I listen to Ch5 and if I find myself in a predicament which I feel may become dangerous if I proceed, I like to check to see if I am able to transmit clearly from my position, before I proceed any further. If I get no response, I usually decide to retreat. If, on the other hand, I get a response, my confidence is regained and I may proceed.

The process of calling for a radio check is brief and concise and so should the answer be. I am not encouraging stations to use Ch5 for radio checks, but if you find yourself faced with a dangerous predicament, a simple response on the radio can be very reassuring.

But, many monitors usually return this call with a long unending one way discussion about the use of the emergency channel, which in itself is more dangerous than they seem to realise. I never return any comments as I am aware that they have heard me clearly.

The crunch came on Sunday, 3 August in the late afternoon, when I came across a party of young kids and a driver, who had stuck their 4x4 in a position which they were unable to get out of. We went to get assistance for them. This having been arranged left only a long wait for the recovery vehicle to arrive.

It was getting late and we had about an hour of sunlight left, so we departed (leaving the 4 wheel drivers there) to go home. We told the stuck party that we would call them on Ch5 when we got to the main town to RE-ASSURE them that the recovery vehicle was on its way.

When I got to the main town I called them on Ch5. There was no answer, and knowing they were out of range, left it at that. Then the Geelong Crest monitor piped up and asked if he could be of assistance. I answered "No, everything is under control." He then came back and started to lecture me on the usage of Ch5, saying that I should go elsewhere if I wanted to make contact with disabled vehicles. His attitude was that he was God and he did not like other people using his channel. He wasted much time in lecturing me, and my answer was to clarify my call sign to him and I said "don't try to play God." There was a background response to that, which was 'Well put.'

I wish to state that it is, in my opinion, totally wrong for these monitors, who are only volunteers, to take the attitude of custodians of the emergency channel without the obvious realisation of what it means to potential users, who wish to be certain that they are getting through clearly or conducting their own rescue or recovery mission. There is no necessity for their involvement unless they are asked.

J. Osborne
Frankston Vic

REPEATERS

As the manager of a small electrical business in Sydney which uses UHF CB radio as our two-way radio system, I enjoy reading each edition of your magazine, especially the UFH rig reports and other items.

Over the past year or so, I have heard and read about a UHF CB repeater for Sydney on channel 2. I read that it belongs to a radio club, and then that a separate repeater group have taken it over and it is on air, and then it disappears again.

It seems that your Sydney Scene writer was most accurate in his last column, except that by the time it was released, the repeater was ordered off the air by the Department of Communications, and I am still waiting for it to come back on.

Can you explain, through your magazine, just what is going on? I am sure that all over Sydney there are some confused UHF users who, like myself, are eagerly waiting for this Sydney-wide repeater. I have a base station in Castle Hill, and a fleet of five mobiles which travel all over Sydney. So we are always hopping from one repeater to another, and in many places are out of range altogether.

Why cannot this repeater be put back on air? If whoever owns the licence cannot 'get their act together', then I think that the Department should let someone else get it up and running.

Can you tell us all what is going on?

Brian Nokes,
Castle Hill,
Sydney.

Back to You

SUBSCRIPTIONS

Firstly, let me say thanks for a great magazine, and three cheers for your decision to go bi-monthly. Next as regards your question of "birds or no birds" on the front cover. I know that we are all serious about our hobby, but let's face it — we are only human — and I don't care how sexist I am, I vote for birds on the front cover. Also, I'm looking for a modification for my CB. I require a jack in the rear panel that I can connect a tape cassette recorder to, so that I can record both my transmitted voice, and the received voice. I have a 40 channel AM/SSB Pearce-Simpson Super Lion transceiver. Now that you are publishing bi-monthly, does that mean you now offer subscription? If so, please give the details.

Peter Short
Carlingford NSW.

At least your honest about the birds Pete! I hope that someone can help you with your recorder problem — if we get any leters, we will forward them on to you.

With regard to your query about subscriptions, we have put it to the boss, and should have some good news for you next issue.

COVER SHOT

You will remember that a number of readers requested the return of our famous birds on the front cover. Well, surprise surprise! We did not get one photo of a possible candidate for the cover, but what we did get was a sheaf of letters against birds and favoring our last two covers featuring rigs only. We haven't got sufficient room to print all the letters, but here's a sample.

"I think the cover of the March CBA was great, but as far as the July/August cover is concerned, fantastic! It shows ingenuity and imagination, and of course shows what the magazine is all about — CB. It's not about girls, or women, and if you need their picture to sell the magazines, then improve the magazine. Actually, the last two magazines are stored "unimproved". Others I have improved by removing the front cover, because I don't want those sort of pictures in my home. So, keep up the good work."

CB CLEAN UP

Firstly, I must point out that in any collection of people you will get the good and the bad, and the misfits. My letter is aimed at all these three sectors of humanity.

I am sure the problems we have in Queensland are no different to what is going on in other states. What I am referring to is this illustrious band of button pushers, morse code bleepers, music players and those wonderful band of people that don't want you to enjoy your QSO because they have no one to talk to, and this other mob of cattle who don't acknowledge 35 LSB as the call channel whether it be officially designated or not by DOC.

Gentle folk don't talk to these people, don't even let them know that you know they exist. I have noticed and probably so have you, that if you talk or make comment to these urchins, they only tend to do their thing more or try and draw you into an argument. Remember rules one and two, and you are saying "But what do I do?"

Firstly, if the urchin is our friend who likes using 35 LSB for his QSO, make your CQ call or whatever during his break or if your equipment is good enough try and call over him. If it is the button pusher, morse beeper etc., on 35 LSB if you don't let them know they are annoying you, they will get bored and pack it in very quickly, that is why rules one and two are so important!

What to do when you are having a QSO whether intra or interstate — as everyone knows we don't call overseas. Firstly, QSY to another frequency and if they follow you, QSY again and again. Use veiled speech e.g. refer to something that happened on another day e.g. QSY to that frequency we used yesterday. QSY my age, your age, house number, last two numbers of your phone number etc., or if you are on a club QSO, it doesn't take long to think up code names for your frequencies — a quick hand-written list passed to your members by mail or phone once a week should suffice. Simple code names should be used "Go Mickey Mouse", "Go Green Man" etc., can soon outfox these urchings.

Lastly, let us not forget courtesy. If a CBer is having an interstate QSO and lands on the frequency on which you are having an in depth conversation on what you are going to do tonight, be nice, quickly QSY or just sit on the side till the party has finished his interstate QSO.

They don't usually last more than a few minutes and you never know, you can call in a breaker when they have finished and make more new friends.

It is more courteous to do things that way than to shout out "f... o.. this frequency is in use, you Richard Cranium." So believe it or not, you start doing the right thing and you never know, people might start following your actions and CB will be better for it.

And, last but not least, listen before you transmit, you could save yourself a heap of trouble. So take care, because we care, MC 77 on the side and listening.

Tony Wilson-Wardle
Ferny Creek
Queensland

INLANDER CLUB

I would like to pass on a little information about our club if I may.

The Inlanders CB Radio club of Australia has been in operation now for a period of seven months (at the time this letter was written) and we are happy to announce that it is well and truly off and running.

We would like to thank all our members for the support they have given their committee in their driving ambition to see the club progress from an idea that started in the imaginative mind of Betty, Inlander 33, who with five other avid CBers Inlanders 07, 05, 99, 29, and yours truly 20 Les, set the ball in motion and progressed from a financial membership of six to approximately two hundred fully operational members Australia wide, in seven months. Despite petty jealousies the Inlanders have encountered with some members of other CB clubs in the association has gone from strength to strength, and are now enlisting new members from all walks of life throughout Australia at a rate of about fifty per month. So if there are any CBers out there who would like any information about the club please feel free to write (our address can be found in the club register) and all relative information will be sent to you.

I would like to congratulate CB ACTION on their services to the CB community and would like on behalf of the Inlanders to offer any assistance to your magazine in the fulfilment of good CBing throughout Australia.

Inlander 20 Les
Vice President
Inlander CB
Radio Club Aust.

CLUB NEWS

This month — a 'special edition' on a special concept — the club broadcast. Not just **any** broadcast, but what is Australia's longest running and unique on-air session — the weekly broadcast of Melbourne's Omega Radio Club.

This club, recognised as a leading group in terms of both 27 MHz and UHF-oriented clubs, was founded in 1979. Growing out of a strong on-air camaraderie, chat sessions were held almost nightly.

'There was always someone wanting to know something' said Les, the club's Honorary Secretary, and someone else who could expound on that subject. If there wasn't, we would get a guest speaker who was well versed in that particular subject.'

Prior to this, experiments had been carried out with a pre-taped news spot every Sunday evening. Inspired by Sydney's revolutionary UHF talk-back 'On 8 At 8' session, Melbourne UHFer Ivan Phelan saw the chance for the Omega radio Club to consolidate both ideas and establish an informative and useful broadcast that could represent the club on air.

Soon after came the icing on the cake — with the issue of VOC-001, an official club callsign from DOC. The regular appearance of VOC-001 each Wednesday night has signalled continued success for the club's broadcast, which — this August — reached its seventh year.

The sessions originally were held on UHF ch. 8, but when repeaters were allowed for the service — the allocated rpt. ch. 8/38 meant a move to a higher simplex channel. To sidestep the claim of 'owning' a certain channel, the broadcast is now held on a channel chosen on the night, normally between ch. 11 and 20. The 'channel of the week' is announced on ch. 11, prior to the commencement of each broadcast.

A succession of stations have played host to the broadcast, although each of course sign on as VOC-001. At present, VBX-671 Barry acts as moderator, with his location providing coverage of all Melbourne. 'I don't think there is any part of Melbourne we don't reach' said Leon, 'even down to Geelong'.

Although only an average of 20-30 stations take part in each week's callback, Leon estimates the 'silent majority' to reliably number well above 100.

Broadcasts commonly have two components — CB radio-oriented news, and a discussion/guest speaker.

The high profile of the Omegas have made them a logical source of 'the good oil' many times. With both the legalisation of repeaters and beam antenna for UHF, stories proudly headlining broadcasts in past years, it has been the bearer of good news more than once.

Guests to the broadcast have been many and varied — the self-proclaimed King Leonard, from the independent principality of Hutt in WA; actor Gus Mercurio; the RSPCA; members of the police's RBT 'Breathalyser' team, and even a Black Witch.

Broadcasts are made using an FM-620, which only recently replaced the 'old faithful' '320 which gave years of service. Up to four microphones are used, then sourced through a mixer, and fed to air. An audio-tape recording is made of each broadcast, although many of the earlier sessions were kept for posterity on video.

On occasions, a telephone patch is also employed. Their broadcast's 7th anniversary was one of these times, when a 'phone link with Sydney was engineered to help make it a truly 'special' night.

In keeping with the auspicious nature of the evening, the club was looking for a Sydney UHFer of note.

Instead, all they could get was poor me — beggars can't be choosers! (Just glad they didn't want their money back).

Anyway, I can tell you that I enjoyed it immensely. Many breakers that night had just begun on UHF, and were quite tickled by the idea of chatting to a Sydney station, simplex, on a handheld! Topics of the night included the development and future of UHF and repeaters, cellular radio, a rundown on the Sydney UHF scene — and a first-hand report on the ravenous floods that had hit Sydney the past days, and were still continuing.

Still, I don't think my own efforts will be as memorable as the night when a ranger from Victoria's Mt Dandenong Animal kingdom visited — along with a pet carpet snake, which quickly found Leon's neck to be a very warm place to wrap itself around!

Leon didn't take many breakers that night — he was quite tied up!

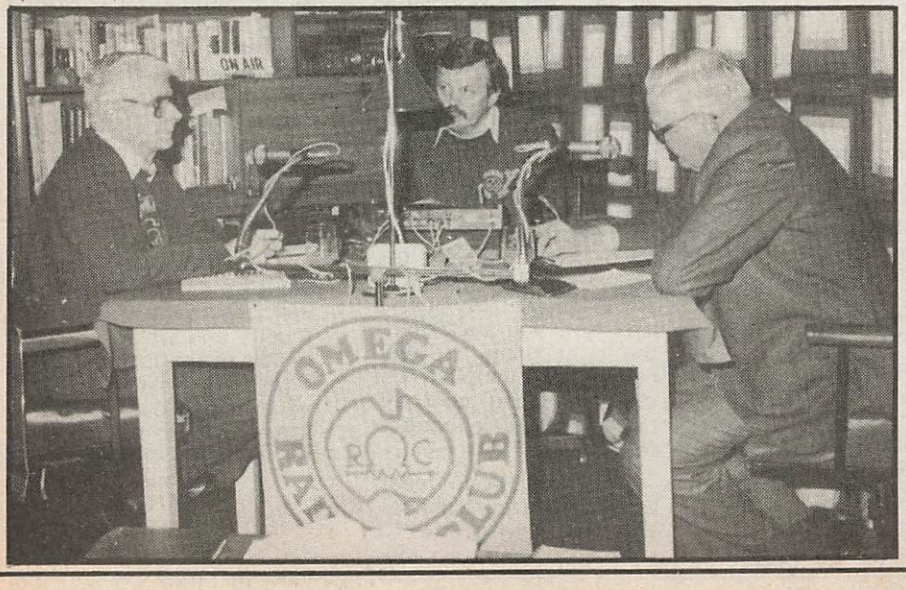
How has the Omega Radio Club's broadcast survived to begin its eigth year, when most others — including 'On 8 At 8' — have died?

'Enthusiasm' claims Leon. 'The enthusiasm of club members like Ivan Phelan, then Gordon Bidgood, and now Barry, who host each week's program. Chris, who keeps a supply of interesting guest speakers on tap. Members, and the whole team — enthusiasm that doesn't fade if you don't have a massive response every week.'

'There are always new people getting onto UHF, and this gets them into the crowd, gives them information and friendly advice. The support of the club, of course, cannot be underestimated.'

The Omega Club's broadcasts must represent one of the best examples of what CB radio is all about — communication.

An Omega Radio Club broadcast in full swing.



CB IN ACTION

By GRAHAM MITCHELL

Once upon a time, a 12 year old lad was helping his father unload some rubbish at the local tip, when he saw a discarded copy of a CB magazine in a nearby pile of newspapers.

The boy took the magazine home, and was immediately bitten by the CB bug. Soon after, at a neighbourhood garage sale, he discovered a 23 ch. AM mobile rig — a Roberts RCB-15 — in working order. Bought for $2, and with a suitable power supply and antenna, he was on air that night.

Now, almost 4 years later, Canberra CBer Adrian Amato is encouraging other youngsters into the hobby of CB radio.

A few things have changed in those years. The Roberts made way for more sophisticated AM/SSB gear, now kept company by a Kenwood TS-130S amateur radio, which Adrian uses under his novice ham licence VK1NYA.

What hasn't changed is his enthusiasm for radio — one he brings to fellow students at Canberra's Ginninderra High School, where Adrian currently studies Year 10.

Adrian began this by organising an 'interest elective', where a group of younger students spent one afternoon each week learning about CB radio.

Basic understanding of antennas, SWR and how to operate the rigs were important, claims Adrian, 'but the best part of the lesson was done on-air, with CB radios. They were very shy at first, but got a lot out of it — one is now sitting for his ham licence.'

Amateur radio was also introduced, using Adrian's callsign under supervision, to contact Pacific countries — Japan, NZ and others — on the 21 MHz novice band. But the main interest remains with CB — 'there are more YLs there!' laughs Adrian.

Lately, he has been involved in another project — coyly termed 'Radio 1GH'. Using equipment donated by school parent Peter Voelker — mixer, console, turntable and records — Adrian co-ordinates playing music over speakers in the assembly and canteen areas during lunchtime.

The school Principal, Mr David Southern, believes that the project is 'another face of the school', and has endorsed an application to DOC to launch a school-based community radio station.

Adrian Amato 15, of Higgins at the console donated to the school's radio club by Mr Peter Voelker. Picture courtesy of Canberra Times.

With such an active involvement in radio, you'd expect Adrian to hold well-developed views on the hobby — and he does.

'CB is an excellent hobby for young people' he believes. 'On a rainy day, they can get on air and chat for hours. A lot of young people feel locked in by their family, don't have room to move — CB helps them to meet others of their age, helps them develop.'

'The only problem is that you quickly get hooked, and you're up until 3 am — that really wrecks your schoolwork!'. But it does have benefits in school, he says — 'as you learn more about CB, about radio-electronics, it's a good match for science studies at school.'

He feels that CB has been stagnating in recent years, 'in Canberra anyway. There are generally a lot of good people, but the problem is when a lot of kids get on at Christmas. But they soon settle down, the older CBers help them along.'

Being so young, in a hobby where many operators are twice his age, does Adrian feel a 'generation gap' on air?

'Not on CB, no. It's all very fair, I've even helped others tune their antennas. It's very different on amateur radio, the older operators have a really superior attitude to beginners.'

Adrian quotes a survey indicating that the vast majority of amateur licencees are aged 40 and over, with barely 1 percent under 20.

He strongly favours re-structuring the licensing system, and supports the recent Linton-Harrison proposals for sweeping changes in licence grades, including the introduction of basic 'beginners' and digital-mode permits, below the present novice grade.

'The young ones are left out of amateur radio, and they know it. That's why they like CB, there are more people of their own age to talk to, they've got more in common.'

UNIDEN SETS SAIL IN '87

Santronic Agencies, Australian representatives of the Uniden brand, have been appointed as official supplier of communications equipment to the 1987 America's Cup.

'We have been chosen as an official sponsor', says Santronics' Graham Johns, 'and will be supplying marine radio equipment to the Royal Perth Yacht Club. This will be used in all official boats, and in the spectator fleet, as well as for general communications.'

The full range of Uniden VHF marine units will be in use, commencing later this year with elimination trials to select the Australian defender.

Having just completed their third yearly appearance at the Sydney Boat Show, Santronics have quickly penetrated the marine radio market. Graham Johns states that the Uniden line-up is now the largest selling in its field.

With the recent addition of two new models — a VHF handheld, and the 'Barracuda' AM/SSB — the Uniden marine range is indeed comprehensive.

'The MC-4700 Barracuda is not just a re-worked CB' claims Johns, 'but a radio designed to the demanding standards for 27 MHz marine equipment.'

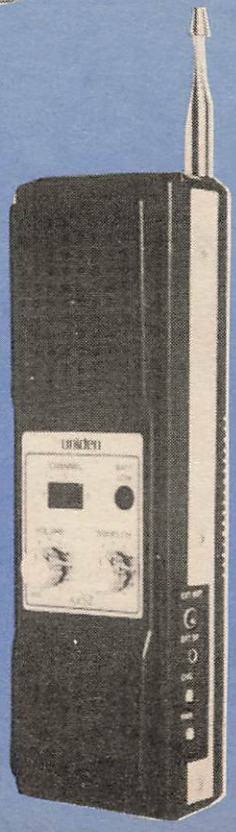
The Barracuda offers 'dual-watch' two-channel monitoring, all 10 allocated channels (27.860-27.980 MHz) and provision for two further 'private' channels.

Selling for $299, Johns expects the Barracuda will achieve the same success as the AM-only 'Sea Dolphin', which he believes to be the largest-selling AM marine radio on the market.

Also creating interest in the 'Sea-Wasp', an AM unit which also receives two VHF frequencies (distress ch. 16 and weather report ch. 67A).

Uniden's MC-990 VHF handheld boasts many features of their top-line models — including all 55 international channels, as well as receive-only on additional American VHF frequencies, for a total '90 channel coverage'. There is also a scan facility, dual-watch, touch-control keypad, and LCD readout. The MC-990 comes with rechargeable ni-cad batteries and charger, and retails at $549.

Sea Dolphin MC-2700



AX-52

AX-55

Sea Wasp MC-4300

Seaphone MC-480

Seaphone MC-722

Sales of other Uniden VHF-marine radios continues to be strong, especially the MC-480. Touted as a radio 'for the economy-conscious boat enthusiasts, without sacrificing performance', Graham Johns says 'This is the largest-selling VHF marine radio in Australia and New Zealand, probably the world — a new model, with dual-watch function, is soon to be introduced.'

Uniden's most innovative VHF is the TBR-60 'Tacklebox Radio' — a portable unit which features all 55 channels and full 25 watts output, it comes complete with antenna for true 'go-anywhere' operation.

The strength of the Uniden name also continues in the CB scene, both 27 MHz and 477 MHz.

NSW Sales Manager Tony Pischedda is pleased with the performance of the Uniden CB radios, which cover every angle of the CB market.

'The Sundowner UHF radios have been very well accepted' says Tony. 'Although it is low in price, the guts of the radio are what counts — it is a quality product, and represents good value for money.'

The traditional 27 MHz band has also taken to the very compact PC-33 and PC-55 AM mobiles, as well as the PC-122 and AX-144 AM/SSB units. This, combined with loyalties to the 'old favourites' of the mobile Grant and Washington base station sideband rigs, and a range of handhelds, keeps the Uniden name firmly established as a 'leader in communications'.

DOWN SOUTH

By Steve Griffin

Hello once again. First off it seems that FRED and his computer got stuck into the system at CBA, in my last column it listed the Humber 1 as Sedan but in fact his name is Sean. Sorry mate.

Many thanks to Trevor, Lotus 3, for sending the extract from ACBRO Action. If you remember, in my last column I was trying to find out what had happened to the people who had jammed all the call channels about a year ago. Apparently his name was John and he operated his jammer from Edwardstown — he pleaded guilty to the charges and was fined $217 in total. That's all — a measly $217 for causing interference to the call channels and to such an extent it was causing problems as far north as Smithfield. Personally I was receiving it on 5/9. He also had an unlicensed UHF transceiver confiscated along with a linear amplifier. John himself is 18 years of age with 8 years of CB operating, or using, under his belt.

★ ★ ★

A letter received from a person out at Elizabeth. It seems there are a number of stations out that way on UHF using power mikes and causing their rigs to over-deviate, or to those not technically minded, over-modulate, causing splatter. One operator in particular splatters a number of stations for three channels either side of the calling channel, which they all seem to talk on — "they" being a group of operators all trying to be ratbags and succeeding rather well. As the writer of the letter says, it's true that if you don't like something then turn the radio off but that's not what we all pay $12.00 a year for, so DOC should get its act together and do something about it.

★ ★ ★

Meanwhile on the DOC subject, at the time of writing DOC is doing something down south. My spies tell me that a number of operators southside have been caught using rigs with extra channels, extra power and linears. At the moment they have only been warned but at least it proves that DOC is out there doing something.

★ ★ ★

Since writing my last column I have been informed that the Trans-World Radio on air forum has not been heard since May 15th. Come on Rod what's happening down there?

★ ★ ★

An article appeared in the Advertiser on July 24th headlined "CB Outgrows It's 'Cowboy' Image", all about how ACRM Gawler-Barossa, helped to rescue an injured motorcycle rider who had fallen from his bike during a six hour enduro event. The spokesman for ACRM saying that CBers stopped saying 10-4 good-buddy years ago. It looks like the media is still against CB and is only just starting to catch up with the fact that we were never cowboys — nor are ever likely to be.

★ ★ ★

Thank you to all the people who contributed to this column — that's what it is about — YOU. At time of writing, early August. I have received three letters with a promise of more that have not yet arrived.

I now have a radio capable of receiving SSB on 27 Mhz but am still unable to transmit, so don't think I'm not there, I'm around, I'm not talking to you simply because I can't. A few times I've been listening on SSB and tried to break onto the channel using AM, and have been promptly told to "P" off. Just think — the next person to try might only have AM, and is in a life-threatening situation, and you are the only one they can hear. Remember, don't be too fast to condem your brothers because they can't afford sideband.

★ ★ ★

With the Grand Prix approaching things should start kicking over here. So drop us a line to PO Box 42, Modbury North, 5092.

COMPUTERISED BEAM HEADING LIST

To be a successful DX operator you really need to have everything just right — top rig, top antenna system — and that costs bulk cash. But, you could well be wasting all that time, effort and money by not aiming your beam at the country or city that you're chasing . . .

At best, the traditional Great Circle map can only give you a rough approximation of what compass bearing you require. If you're a few degrees out in your heading you could literally be thousands of kilometres out at the other end.

My list of beam headings is based on the latitude and longitude of your own QTH. Each list is based on these figures and is applicable only to *your* QTH. The list includes the callsign, country, city at which the heading is directed, short and long path headings, distance in miles/kilometres. There are over 400 individual headings including a complete breakdown on American and Canadian states.

These lists have been tried and tested by hundreds of satisfied operators and they have been sold as far afield as Greenland and Korea. The cost is a once only outlay of $7.50 for a list that will last you a lifetime of DXing.

If possible, send your lat/long co-ordinates (if not, we can check it out) along with payment of $7.50 to BINT SERVICES, PO Box 323, Cheltenham, 3192, Vic. You'll have your own beam heading list within a couple of days.

PS: We can do you a nice QSL card too — see advert. elsewhere in magazine.

(Reg office 38 Granya Grove Mt Eliza)

`CB GLOSSARY´

By STEVE STEPHENS

The following glossary should be helpful to the ever growing number of new CBers, and some of the old hands as well. Steve Stephens, who compiled this glossary has made every effort to cover all aspects of CB, and in our opinion, has done a top job. However, there are bound to be terms omitted, or terms which you don't agree with — but you must admit, the list as it appears is better than no list at all.

AC (Alternating Current): Is the normal domestic power supply and changes polarity at a rate of 50 cycles a second (50 hertz). It is measured in volts.

ABSORPTION: Is the effect the "D" Layer has on lower frequencies during local daylight. At night it disappears allowing us to hear distant broadcast stations.

AF (Audio Frequency): Sound your ears can detect. Usually from about 50 hertz to about 15,000 (1.5kHz).

A.F. GAIN: Another name for the volume control on your radio.

AM (Amplitude Modulation): A type of transmission where the information (your voice) is superimposed on a carrier. It is not very efficient compared to SSB.

AMPS (Amperes): The amount of current being consumed in a circuit. It is related to the amount of voltage being applied.

ANL (Automatic Noise Limiter): A switch which is used to remove interference from the received signal.

AR (Amateur Radio): The next step up from CB. It needs a fair amount of study to pass the required exams in morse code, electronic theory, and regulations - but it will open up a whole new world to the keen CBer.

ANTENNAS (Aerials): The part of a station which radiate and pick up electromagnetic waves from the air. For transmission their dimensions are critical but generally, the higher and bigger, the better the results will be.

ATTENUATION: The same as making a strong signal weaker. The RF gain control attenuates the incoming signals.

BC (Broadcast): A general transmission. Also, the radio and TV stations which transmit programs for the public.

BCI (Broadcast Interference): The reception of "Out of Band" transmissions.

BEAM: A type of antenna where several parallel elements are mounted on a boom. It receives best from one direction so is usually rotatable.

BI-LINEAR (Illegal on CB): This is an RF amplifier with a built in receive preamp. It boosts both incoming & outgoing signals.

BREAKER: To break into an on air conversation. (Don't break in unnecessarily as it's annoying if excessive).

CALLSIGNS: Are used to identify stations. Official DOC issued call signs should be used but most operators use club, or individual call signs.

CAPTURE: A term used to describe the effect of FM receivers to "lock onto" the strongest signal.

CLARIFIER: A control used to fine tune an SSB signal. It shouldn't affect AM or your outgoing signal.

COAX: (Coaxial cable): The normal cable used to transfer the signals between radios and antennas etc.

COMPRESSOR: A form of speech processing used in the mic. circuit to give more punch to your transmission.

COLLECTOR: The shortest element on a beam or quad. They are in front of the driven element.

CQ (Seek you): A general call to anyone who may be listening.

CRYSTAL: A component used to determine the operating frequency. (Also see PLL).

DC (Direct current): Power supplied by battery or a DC power supply (which has rectified the AC source). Measured in volts.

DE (Driven element): The element in a

beam or quad which is connected to the feed line (coax).

DELTA LOOP: A type of antenna which uses elements (usually of wire) one wavelength long. it is directional like a beam.

DEVIATION: The amount an audio signal alters the RF carrier in FM transmissions

DF (Direction Finding): A small loop antenna connected to a receiver to home in on a signal.

"D" LAYER: A part of the atmosphere which causes absorption of the lower frequencies during daytime.

DIPOLE: A simple half-wave antenna. It is Bi-directional if horizontal and omni-directional if vertical.

DOC (Department Of Communications). The radio licensing and regulating authority. See Government departments in your phone book.

DUMMY LOAD: A non radiating termination to be used instead of an antenna when testing transmitters.

DUPLEX (Repeater or split): Transmitting and receiving on separate frequencies.

DX: Abbreviation for distant or long distance stations.

DYNAMIC: Standard microphone insert which uses a magnet and coil arrangement similar to a speaker.

"E" LAYER: The layer above the "D" layer in the atmosphere, which causes some of your signals to "skip" long distances before returning to earth.

ELECTRET (Condensor) microphone insert: Much more sensitive than standard dynamic mics and not suitable for noisy environments.

EMC (Electromagnetic compatibility): The ability of equipment to ignore nearby RF sources which would otherwise interfere with it.

F1-F2: The top two layers in the upper atmosphere which affect communications. The F1 layer (at about 300 kilometres) causes most of the 27MHz skip.

FILTERS: Assemblies which reject or pass different frequencies according to their design. High pass filters are fitted to TV to reject CB signals.

FINALS: The final power transistors in your rig. These are the ones usually damaged by high SWR.

FREQUENCY: The number of cycles per second (Hertz) which your rigs insides are tuned to receive or transmit a specific signal. 27 MHz is 27 million cycles per second.

FM (Frequency Modulation): Used in UHF/CB. The audio signal (your voice) deviates the FM carrier frequency to transmit a signal.

FULL CALL (Amateur Radio): 400 watts legal power, working the world from DC to daylight via satellites, CW, RTTY, TV, SSB, FM, Repeaters etc.

FWD (Forward): Calibrate or set position on SWR meters. Transmit on AM & move the control to put the needle on the rightside mark on the dial. Then switch to ref or rev. The lower the reading the less reflected (wasted) power and the better your efficiency.

GAIN: Opposite of attenuation. To amplify a weak signal.

GAMMA MATCH: An impedance matching device on beam antennas, for adjusting SWR.

GROUND WAVE: The portion of your transmission which doesn't travel upward to skip over long distances. It can be anywhere from 0 km to 50 km at ground level.

GP (Ground plane) antenna: Doesn't need to be mounted on a metal surface to work efficiently. Usually half or 5/8 wavelength.

HAM: Amateur radio operator.

HANDLE: Your name.

HERTZ: Cycles per second, in reference to frequency.

HF (High frequency): From 3MHz to 30MHz. 1MHz = 1,000,000 cycles/second.

HOP: The action of "skip" signals which are reflected by the ionosphere back to earth. (Multihop = 2 or more hops).

IC (Integrated circuit): A small chip of silicon with many components built-in Commonly 100s of transistors on a single chip).

IMPEDANCE: (Z) Measured in ohms. An impedance mismatch causes high SWR. Your antenna and coax should be 50 ohms.

IONOSPHERE: Consists of 4 layers. (D,E,F1,F2). Their heights are roughly: 80km; 120km; 300km; 800km above the earth. Different frequencies are affected in various ways by each layer.

ISOTROPIC (Radiator) A theoretical antenna which other antenna designs are compared with. It theoretically radiates equally in all directions.

kHz: (Kilohertz) 1KHz = 1000 cycles per second. A measurement of frequency.

LICENCE: Issued by DOC for each "type approved" transmitter. The more licenses issued for a band, the more important that band becomes. This means more possible improvements.

LINEAR (Amplifier): Illegal on CB. This boosts your transmission many times and can be a blessing or a curse depending on the operator.

LONGWIRE (Antenna): Not recommended for CB transmission, but very good for general listening. The higher and longer the better.

LF (Low frequency): 30kHz to 300kHz. Navigation and beacon band. Below the broadcast band.

LSB (Lower side band): Uses less than half a CB channel. You can use LSB while someone else uses USB. Using AM mode blocks both LSB and USB.

MF (Medium frequency): 300kHz to 3MHz. The normal radio broadcast band is 505kHz to 1.605MHz.

MEGS (Megahertz): A measurement of frequency. 1MHz = 1 million cycles per second.

MIC GAIN: A control to vary the sensitivity of your microphone circuit. Virtually turns your SSB transmission up or down.

MULTITESTER: A meter which can measure resistance (ohms), voltage and current (amps). It is very handy for checking coax etc.

MUTE Squelch): A control which eliminates background noise. On FM (UHF/CB) it is necessary to silence the constant hiss. On AM and SSB, it is better left off (minimum).

Advancing this control beyond the quieting threshold means signals have to be much stronger to be received. A slight increase can make a big difference.

NOVICE (Amateur radio): The next step up for keen CBers. Contact DOC or the Wireless Institute of Australia for further details.

NB (Noise blanker): A control which eliminates ignition noise from a received signal.

OHMS: The unit of resistance, also impedance. 1K ohm = 1000 ohms. 1M ohm = 1,000,000 ohms.

OMNIDIRECTIONAL (Antenna): One which radiates equally toward the north, south, east and west. (A vertical whip or ground plane antenna).

OPERATING PROCEDURE

1. Always listen before transmitting
2. Don't break into other peoples conversations unless you have something useful to say.
3. Use your callsign and give your name when joining a conversation (QSO).
4. Don't respond to annoying transmissions. The small brain gets great satisfaction from being acknowledged as a pest.
5. If someone asks you to QSL, either do so immediately to save disappointment or simply decline there and then.
6. Always remember that someone, somewhere, is listening to every word you say. The world is full of listeners (sandbaggers).

OUTPUT: Measured in watts. SSB output is stated as 12 watts PEP (Peak Envelope Power) which is the maximum amplitude that can be achieved with any audio signal. AM output is 4 watts, UHF CB output is 5 watts.

PA (Public address): A control which causes your voice to be amplified and heard from a PA "horn", which you plug into the back of your radio.

PCB (Printed circuit board): The board inside your radio which connects the components via printed copper tracks.

PEP: See output.

PHASED ARRAYS: Using 2 or more antennas to increase gain or alter direction of signals.

PIRATES: Unlicensed operators. Freeloaders using the facilities which licensed users are paying for. Illegal out-of-band operating.

PL259: The male plug most commonly connected to coax. For UHF, CB other plugs offer less loss (ie BNC, N, etc).

PLL (Phase locked loop): An IC which generates any required frequency and saves having a crystal for each channel.
POWER (also see output): CB radios require a power supply rated at 12-13.8 volts DC and a minimum capacity of 2 amps. It should be a regulated supply.
Regardless of the current (amps) rating of the supply, a radio will only draw the current it needs. A larger supply only means easier delivery, not more power from your radio.
POLARISATION: (Antennas) Vertical polaristion means the electric field (and so the antenna element) is straight up and down.
Horizontal polarisation means the elements are parallel with the ground.
PREAMP: A receive-only amplifier which boosts income signals.
PROCESSER: A box of tricks connected between Mic. & radio to give the audio input more body.
PTT (Push to talk): The bar on your microphone which switches from receive to transmit, when depressed.
Q CODE: Originally for Morse code, it has been carried over to CB. Only a few of these are needed normally.
QRM: Man made noise.
QRN: Natural (atmospheric) noise.
QRZ(?): Who is calling?
QSB: Fading of signal strength.
QSL: (Card) Confirming a conversation which took place on air. It should include full details of callsigns, frequency, date and time. Also information about your station.
QSO: Conversation
QTH: Location you are transmitting from.
Each of the above can be used as a statement or a question.
QUAD: (Antenna) Usually made of wire and using a full wavelength for each element. Similar to a beam for transmitting and receiving, but very different in construction.
QUARTER WAVE: (Antenna). A vertical whip (up to about 3 meters long at 27 MHz. By winding the wire in a helical pattern it can be made shorter. Shorter means less efficiency.
QUIETING: (UHF/FM, CB) Receiving a very clear voice with no background hiss.
RAD COM ACT (Radio Communications Regulations): The latest laws controlling everything to do with radio frequency (RF) energy, including the old RB14 and RB14A.
REFLECTOR (Antennas): The longest element on a beam or quad. It is behind the driven element.
REF. (Also rev): Switch position on a SWR meter which shows actual SWR (reflected power) after the meter is calibrated in the "FWD" (set) position.
REV RPTR: A switch on UHF CB (and some other radios) which enables you to listen to another stations uplink into a repeater. If heard OK, you should go to a simplex channel.
RF (Radio Frequency): The spectrum above AF (Audio frequency), ie. Above about 20 kHz. The RF spectrum goes right up to 300 Gigahertz (toward daylight).
RFI (Radio frequency interference): Unwanted reception of other signals.
RF GAIN: A control which attenuates incoming signals when moved below maximum setting. It doesn't affect your transmission.
RI (Radio inspector): DOC field officers who may inspect your station on production of proper identification and have search and seizure powers when necessary.
RMS (Root mean square): Roughly equivalent to average power (not peak or maximum). It gives a more accurate description of a power supply's or radio's output.
RPTR (Repeater): A device which receives on one frequency and simultaneously transmits on another frequency. Used to extend coverage and usually mounted on hills or tall buildings.
RX: Receiver
SCANNER: A receiver capable or covering large areas of the RF spectrum particularly in the VHF/UHF region.
SCRAMBLER: A device added to a radio which encodes and decodes speech to maintain privacy. It makes scrambled transmissions sound garbled.
SELCALL (Selective calling): An attachment fitted to all radios in a group which prevents reception of any signals not specifically intended for them. Usually switch selectable.
SELECTIVITY: The ability of a receiver to resolve a weak signal which is in close proximity to other signals. it is similar to bandwidth and is measured in DB/kHz.
SENSITIVITY: The ability of a receiver to pick up very weak signals.
SIMP (Simplex): Transmitting and receiving on the same frequency. (Opposite of repeater operation).
S METER: Signal meter on your radio which indicates relative strength of incoming signals. It usually was a second scale which shows output on transmit.
SN: Signal to noise radio which indicates how well a weak signal will be heard above all other noises including internal receiver noise.
SINAD: (Signal. Noise and distortion) measurement which shows overall merit of a radio's design and construction.
SKIP: The action of signals which are "bounced off" the ionosphere to return to earth much further away.
SLIDER (Illegal): A "clarifier" which alters the transmit frequency as well as receive.
SO239: Socket mounted on the back of your radio for the PL259 antenna plug. Other types are: BNC, N, Etc.
SPLATTER: Breakthrough from one channel to another. Usually a "dirty" or very strong transmission is the cause, but can be due to poor adjacent-channel rejection.
SPLIT: See duplex.
SQUELCH: See mute.
SSB (Single side band): See LSB.
SWL: Short wave listener. Short wave is considered to be anywhere above the broadcast band.
SWR: A ratio of power out of a transmitter to the power reflected by an untuned load (coax or antenna). Lower SWR means better efficiency, high SWR means trouble.
TROPOSPHERE: The lowest part of the atmosphere (where ground waves travel).
TVI (Television Interference): Reception on a TV of other signals, usually cured by fitting a high-pass filter at the back of the TV.
TX: Transmitter
UHF (Ultra high frequency): From 300 MHz to 3000 MHz (3GHz (or 3 gigahertz). Include UHF CB.
USB (Upper side band): See SSB and LSB.
uV (Microvolts): The measurement of signal strength. 0.5uV is near the minimum signal a SSB CB can pickup.
VERTICAL (Antenna): Mounted straight up are down, see also polarisation.
VOLTS (Unit of electrical pressure). Most CB equipment is designed to run on 12-13.8 volts DC of 240 volts AC (mains).
VHF (Very high frequency): From 30MHz to 300 MHz. This is above the coverage of most shortwave receivers and where most scanners start.
VLF (Very low frequency): From 3kHz to 30kHz. This includes most of the audio range of your ears.
WATTS A measurement of power, it is the sum of: Applied voltage times current draw (amps). A SSB CB puts out 12 watts PEP, and uses about 3.5 watts when run from a 12V supply.
WHIP: A short antenna for mobile use, usually a quarter wavelength.
WAVELENGTH: The distance between the same point on two consecutive cycles. As radio waves travel at about 300,000,000 meters/second we can calculate their length if we know their frequency and vice versa. The formula is 300 over frequency (MHz). The answer is meters. This is one wavelength. Antennas are usually 1/4 wave, 1/2, 3/4, 5/8 or 1 wavelength.
XTAL Crystal: A frequency determining component.
YAGI (Beam): A directional antenna with several parallel elements mounted on a boom. Usually at least 1 director. 1 driven element and 1 reflector. May be horizontal or vertical.
Z (Impedance): The resistance to flow in an AC (RF) circuit. It is the combined effect of resistance, capacitance and inductance. An impedance mismatch results in high SWR.
This is only a simple guide to some of the more common terms used on CB. There are many books available for further information.

CAPITAL CITY CBING

CANBERRA

By GRAHAM MITCHELL

Political nerve-centre of the country, mecca for lobbyist groups of all fields, Canberra was where much of the action took place during the campaign to legalise CB radio, during 1976-77.

If the populated state capitals were the heart of the movement — where retailers, CB-ers and clubs were most numerous — then Canberra was the politically-oriented brain.

Both CREST and the now-defunct NCRA (National Citizens' Radio Association) were founded in the capital, retaining 'head offices' there for many years.

Many CB clubs were formed in the mould of the CT (Charlie Tango) Club, which shared its leading lights with CREST and the NCRA, at a time when the CTs were Australia's premier CB radio group.

When the Charlie Tangos closed their doors in 1982, it formally signalled the end of an era. And while the CB scene has improved dramatically over the past few years, Canberra lags behind — neither 27 MHz or UHF CB carry the mark of activity or dynamic character of other cities.

It reflects the trend in social CBing, although it has yet to catch up with the move towards enthusiast-oriented radio clubs that is slowly re-emerging.

27 MHz

Most active on the airwaves are the Pathfinder, Pioneer Radio and Wild Geese groups. And on the airwaves is the most likely place you'll find them, as none of these clubs hold regular meetings. Instead, there are on-air nets, and social outings to cater for the family-age membership that the clubs represent.

However inactive the band may be at times, both the emergency and road channels are still mainstays of 27 MHz.

CREST provides a full 24 hr monitoring service on ch. 9, whilst travellers to and through Canberra keep ch. 8 alive. Highway bases such as Carol at Fishwyck, with years of service to her credit, can always be relied up for the 'good oil'.

UHF CB

The most noticeable aspect of 477 MHz in Canberra is the high proportion of business users on the band. Much higher, it seems, than any other comparable city. An estimated 400-500 commercial stations are active, many with selective calling.

Of an evening, hobbyist UHFers join the ranks — and, like their business counterparts, use the city's sole repeater heavily indeed.

This is the Philips-sponsored ch. 2/32 repeater, located at Isaacs Ridge. Covering the entire city, with a radius of perhaps 25-30 miles from its site, it bears almost all UHF traffic. Following the example of Newcastle, a regional area where two repeaters are in use, pressure has been growing for the approval of a second city repeater, to both extend UHF coverage (complementing 2/32) and take the strain from Isaacs Ridge.

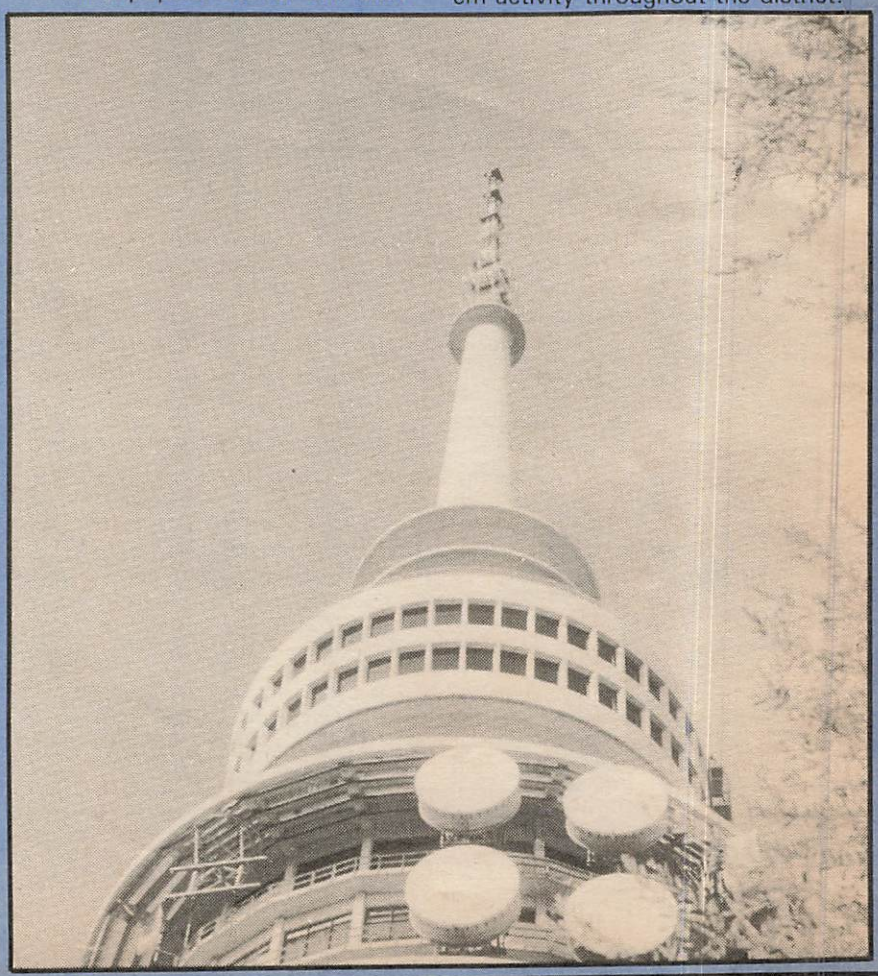
The most popular site for UHF chatting, HF DX or whatever, is Mt Ainslie, known to the local fraternity as 'Cloud 9'. Directly behind the War Memorial, at 842 m ASL, Ainslie is also a favoured lookout.

AMATEUR RADIO

The ham radio scene in Canberra is also fairly quiet, with barely 400 licenced operators spread over the entire ACT. There are only two dedicated amateur radio clubs, all others belonging to high schools, technical colleges and other institutions.

Repeaters, however few they may be, provide excellent coverage of the region. For 2 metres, try channels 6900 and 6950 (146.900 and 146.950 MHz). 6950 is the most active, sited at Mt Ginini with a mobile range that penetrates the entire ACT and beyond. 6900, at Black Hill, is more locally-oriented, and used less often.

UHF amateur operators rely heavily on the 70 cm repeater on ch. 8525 (438.525 MHz), currently located at Isaacs Ridge. Soon due for re-location to Mt Ginini, it will further enhance 70 cm activity throughout the district.



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AUSTRALIAN UHF REPEATER LIST

AREA	CHANNEL	CALLSIGN	LOCATION	SPONSOR
New South Wales				
Jindabyne	1/31	JIN01	Jindabyne	Marist Brothers, Corinya Alpine Centre
Sydney	1/31	SYD 01	Hurstville	N.I.R.O.
Corowa	1/31	COR 01	Corowa	Corowa Electronics
Tamworth	1/31	TAM 01	Windworth	Landlink Communications
Blue Mountains	2/32	KUR 02	Kurrajong Heights	Blue Mtns Rptr Assoc.
Parkes	2/32	PAR 02	Parkes	Bionics Australia
Narrabri	2/32	NBR 02	Castletop Mountain	Lance Hannaford Electronics
Sydney	3/33	SYD 03	Prospect	Philips-TMC
Tenterfield	3/33	MTI 03	Mt McKenzie	Nathan Ross Electronics
Armidale	4/34	ARM 04	Armidale	New England Mobile Communications
Albury	4/34	ALB 04	Lavington	Albury Communications
Muswellbrook	4/34	MUS 04	Mt Arthur	General Communications
Newcastle	6/36	NEW 06	New Lambton	
Coffs Harbour	6/36	COF 06	Coffs Harbour	Country Wide Communications
Moree	6/36	MOR 06	Terry Hi-Fi	Des Groth Radio-Electronics
Sydney	7/37	SYD 07	Willoughby	Philips-TMC
Bathurst	8/38	BAT 08	Mt Panorama	Serv-U Appliance Centre
Bimmil Hill	2/32	EDN 02	—	—
Deniliquin	3/33	DNQ 03	Deniliquin	Deniliquin Machinery
Mt Bobbara	1/31	BO 01	—	—
Murtee Stn (Wilcannia	1/31	MRT 01	—	—
Raus	2/32	LIS 02	—	—
Tumbarumba	3/33	MTI 03	Mt Ikes	—
Walbundrie	2/32	WBD 02	—	Corowa Electronics
Glen Innes	7/37	GLI 07	Mt Rumbee	Glen Innes Amat Radio Club
Lismore	1/31	LIS 02	RAUS	—
Bega	6/36	BGA 06	Mumbulla Mt	Athol McCoy Twoway Radio
Newcastle	1/31	CHT 01	Charlestown	—
ACT				
Canberra	2/32	CBA 02	Isaacs Ridge	Philips-TMC
Victoria				
Melbourne	1/31	MEL 01	Broadmeadows	Philips-TMC
Hamilton	1/31	HAM 01	Mt Bainbridge	Hamilton Electronics
Bairnsdale	1/31	TAM 01	Mt Nugong	Bairnsdale Communications
Moe	2/32	MOE 02	Moe	Gippsland Repeater Assoc.
Ballarat	2/32	BAL 02	Mt Buninyong	Central Highlands Repeater Association
Melbourne	3/33	MEL 03	Lysterfield	Philips-TMC
Yelta	3/33	YLA 03	Yelta	Nor-Co Sales & Service
Bendigo	4/34	BEN 04	Specimen Hill	Central Victorian Repeater Association
Carrajung	4/34	CRJ 04	Carrajung	Carrajung UHF CB Repeater Association
Hawkesdale	4/34	HAW 04	Hawkesdale	
Melbourne	5/35	MEL 05	Olinda	Paravic Sports Association
Gippsland	6/36	GIP 06	Mt Taylor	Gippsland Repeater Association
Ararat	6/36	WIL 06	Mt William	Mt William UHF CBRs Rpt. Committee
Wangaratta	6/36	WAN 06	Warby Ranges	Corowa Electronics
Melbourne	7/37	MEL 07	Frankston	Powerband Communications
Shepparton	7/37	SHP 07	Shepparton	Angus Communications
Victoria (anywhere!)	Various	MEL 99	Anywhere	Omega Radio Club
Lake Eildon/Alexandra	1/31	ALX 01	Mt Eildon	Weeks Radio
Mt Wombat	3/33	WBT 03	—	—
Weeaproinah	2/32	WPH 02	—	—
Queensland				
Brisbane	1/31	BNE 01	Mt Cotton	Philips-TMC
Bundaberg	1/31	WBB 01	Mt Perry	Bundaberg Hi-Fi Stereo
Mt Isa	1/31	JLS 01	Mt Isa	Queensland Educational Department
Rockhampton	1/31	RKY 01	Mt Archer	Capricornia UHF Repeater Association
Atherton-Mareeba	1/31	ATH 01	Rocky Creek	Maartens Electronics
Gunalda	2/32	GUN 02	Gunalda Range	Ralph Hill Electrical
Taroom	2/32	TAR 02	Taroom	Taroom Repeater Association
Toowoomba	2/32	TWB 02	Toowoomba	Custom Scientific Electronic
Mackay	3/33	MKY 03	Farleigh	Mackay Citizens Repeater Group
Monto	3/33	MTO 03	Pine Mountain	Monto UHF CBRS Repeater: Committee
Tin Can Bay	3/33	DIP 03	Double Island Point	Tin Can Bay Lions Club
Springsure	3/33	SPR 03	Springsure	Bauhina S.E.S.
Mt Hopeful	4/34	HOP 04	Mt Hopeful	Mt Hopeful UHF Repeater Association
Mt Mowbullan	4/34	GTC 04	Mt Mowbullan	G.T. Communications
Bundaberg	4/34	BBG 04	Sloping Hummock	Bundaberg Hi-fi Stereo
Goondiwindi	4/34	GDI 04	Goondiwindi	Border TV & Radio Communications
Brisbane	5/35	BNE 05	Mt Glorious	ACRM (Queensland)
Caloundra	6/36	NOC 06	Bald Knob	Ralph Hill Electrical
Gladstone	6/36	GLD 06	Mt Larcom	Nixon Controls
Palm Island	6/36	PAL 06	Palm Island	—
Brisbane	7/37	BNE 07	Toohey Mountain	Custom Scientific Electronics
Murgon	7/37	MUR 07	Murgon	Murgon Repeater Association
Biloela	7/37	BIL 07	Mt Bertha	Biloela Repeater Association
Clermont	1/31	BDK 01	—	—
Dingo	6/36	BLK 06	Blackdown T/land	Blackdown Reptr Assoc
Marlborough	2/32	MAB 02	—	—
Mt Yarrabah	3/33	YRB 03	—	—
Trinidad	2/32	TRN 02	Trinindad Station	—
Cairns	3/33	GCG 03	Mt Yarrabah	GCG Communications
Mt Stewart	1/31	STU 01	Mt Stewart	Olbis Ind
Roma	1/31	ROM 01	Mt Bassett	Roma Teleradio
Mt Cudmore	2/32	CUD 02	Mt Cudmore	
Coolangatta	4/34	CLG 04	Coolangatta	Philips Comm.
Burnett Ranges	6/36	CBT 06	Mundubbera	Custom Sci. Elec
Yaraka	7/37	YKA 07	Mt Slowcombe	Yaraka Rpt Assn

South Australia

Adelaide	1/31	ADL 01	Summerton	Philips-TMC
Cleve	2/32	CLV 02	Mt Nield	Cleve Repeater Association
Mt Gambier	2/32	MTG 02	The Bluff	South-east UHF Repeater Association
Adelaide	3/33	ADL 03	Trott Park	Philips-TMC
Kangaroo Island	4/34	PKI 04	Parndana	Kangaroo Island Repeater Association
Adelaide	5/35	ADL 05	Hawthorndene	ACRM (South Australia)
Whyalla	6/36	WHA 06	Mt Laura	Gulf Communications
Quarry Hill	7/37	CLR 07	Quarry Hill	Mid-north Repeater Association
Mt Bryan	8/38	BRY 08	Mt Bryan	Mt Bryan Repeater Association
Port Lincoln	8/38	PLT 08	Tumby Bay	Kayam Electronics
Black Rock Peak	2/32	BRP 02	Black Rock Peak	Toops Electrical
Grose Island	5/35	GRS 05	—	—

Nth Territory

Darwin	1/31	DRW 01	Darwin	Seascan Communications

West Australia

Perth	1/31	PER 01	Wannero	Philips-TMC
Bunbury	2/32	BUN 02	Rowlands	Greyhound TV Sales/Service
Perth	3/33	PER 03	Roleystone	Philips-TMC
Mt Barker	7/37	MTB04	Mt Barker	Plantaganet Repeater Institute
Dinninup	4/34	BYB 04	Dinninup	Boyup Brookfarm Communications Group
Wyalkatcham	6/36	WKM 06	Wyalkatcham	D & GJ Peace
Margaret River	6/36	MGR 06	—	
York	7/37	YRK 07	Mt Bakewell	UHFAWA
Wickham	1/31	WIK 01	—	—

Tasmania

Central Tasmania	3/33	NEC 03	Tower Hill	NE Repeater Group
Hobart	1/31	HBT 01	Mt Faulkner	CREST
Launceston	2/32	LCN 02	Mt Arthur	Launceston Repeater Association
Burnie	8/38	BRN 08	Round Hill	North-west Coast Repeater Association
Triabunna	6/36	REC 06	Mt Tombs	East Coast UHF Repeater Assoc.

This list was compiled from official DOC information club newsletters, reader's letters and telephone calls. If you have any additional information as to new repeaters, locations, sponsors etc, please forward the information by mail to:

CB Repeater List
c/o GPO Box 628E
MELBOURNE. VIC 3001

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21	22	23	24	25

Name.....

Address.....

CB Action Club Register

NSW

Amateur and Citizens Radio Club, 2 Griffith Ave, Roseville NSW 2069.
Argonauts Radio Contact Club, C/- PO Railway Town NSW 2880.
Barrenjoey Peninsula Area CB Radio Club, PO Box 25, Avalon NSW 2107.
Berowra CB Radio Club, PO Box 2, Berowra NSW 2081.
Black Ace CB club & CB Callbook Club of Licensed Operatores, 18 Malvina Pde, Gorokan NSW 2263.
Black Stump Radio Club PO Box 179, Coonabarabran NSW 2357.
Blue Mountains Repeater Association, PO Box 358, Granville NSW 2142.
Bravo Victor Radio Club C/- 11 Canning St Bega NSW 2550.
CB Callbook Club of Licensed Operators, 18 Malvina Parade, Gorokan, NSW 2263.
Central Western Citizens Band Community Radio Club, PO Box 628 Orange NSW 2800.
Disabled Water Sports Charity No 2023, C/- PO Saratoga NSW 2250.
G.L.C. Eastern Bases CB Radio Club, PO Box 767, Gosford NSW 225-.
Gosford Citizens Radio Club, PO Box 447, Gosford NSW 2250.
National Dingo Association C/- Smithville via Broken Hill NSW 2880.
Greater Cessnock City Radio Association, 48 Mayfield St, Cessnock NSW 2325.
Leisure Coast CB Radio Club, PO Box 1127, Wollongong, NSW 2500.
MacLeay Valley CB Radio Club PO Box 34, Kempsey NSW 2440.
Mallee Radio Australia CB Radio Club, PO Box 920, Griffith NAW 2680.
Metropolitan West Radio Club, 74 Van Diemen Ave, Willmot NSW 2770.
Mike India CB Radio Club, PO Box 778, Campbelltown NSW 2560.
Moonlighters District Radio Club, PO Box 13, Hawks Nest NSW 2324.
Native Dog Hill CB Club, PO Box 50, Warril NSW 2528.
November Alpha Club, PO Box 412, Narrandera NSW 2700.
Overland Radio Club Inc (Sydney Branch), PO Box 295, Dee Why Sydney NSW 2099.
Pathfinder CB Social Club of Aust. Queanbeyan/Canberra Div PO Box 771, Queanbeyan NSW 2620.
Pathfinder Radio Group NSW, PO Box 167, St Mary's NSW 2750.
Pioneer CB Radio and Social club, PO Box 34, Boolaroo NSW 2284.
REACT NSW State Team, 716 Peel St, Albury NSW 2640.
Riverina Radio CB Social Club, 29 Parkinson Cres, Griffith NSW 2680.
Rough As Guts Radio (RAG), Finns Rd, Kulnura, RMB 22442, NSW 2250
Shallow Water Sierra Whisky Club, PO Box 857, Nowra NSW 2540.
Sydney Radio Group, PO Box 184 Northbridge, Sydney, NSW 2063
Tango Romeo Echo CB Club, PO BOx 688, Taree NSW 2430.
Tango-X-ray Side-band Radio Club of Australia, PO Box 664, Castle Hill NSW 2154.
The Beam Club of Australia, PO Box 633, Brookvale NSW 2100.
Viking CB Radio Club PO Box 133 Miller NSW 2168.
Western Radio club, PO Box 88, Enfield NSW 2136.
Whisky Lima Radio Club PO Bpx 139 Revesby NSW 2212.
Williams Valley Radio Club PO BOx 50 Dungong NSW 2420.
Wombat CB Radio Club, PO Box 348, Lavington NSW 2641.

WA

ACREM WA, South West Division, 68 Rogers Avenue, Katanning WA 6317.
Alpha Whiskey Alpha Radio Club 180 Bay View Dve Little Grove Albany WA 6330.
Alpha Whiskey Alpha Club, PO Box 997, Albany WA 7330.
Australian Radio Group, PO Box 429, Merridin WA 6415.
Black Swans CQDX Club of WA, PO Box 220, Kwinana WA 6167.
Bunbury Radio Club Inc. PO Box 31, Bunbury WA 6230.
Canning River Radio Club, 53 Parkside Ave, Mt Pleasant WA 6153.
Carnarvon Radio Club, PO Box 294, Carnarvon WA 6701.
Echo Radio CB Club, PO Box 519, Claremont, WA 6010.
Freedom Group Perth, PO Box 9, Palmyra WA 6157.
Gascoyne CB Club PO Box 947 Carnarvon WA 6701.
Golden Hawk CB Radio Club of Australia, PO Box 1183, Bunbury WA 6230.
Perth Acrem and Mustang CB Social Club, PO Box 193, Greenwood WA 6024.
Pilbara Radio Group, PO Box 95, Parraburdoo WA 6754.
Port Hedland Whisky Alpha CB Club, PO Box 2142, South Hedland WA 6722.
REACT WA State Team, 11 Coates St, Hamilton Hill WA 6163.
Sandgroper Club of South West WA PO Box 249 Collie WA 6225.
Southern River Radio Group PO Box 38 Kelmscott WA 6111
The Mango Club, PO Box 241, Hillarys WA 6025.
The UHF Association of WA Inc, PO Box 186d, Hillarys WA 6025.
Wanneroo Citizens Radio Emergency Services Teams WA Inc, PO Box 402, Wanneroo WA 6065.
Western Radio Club, PO Box 484 Collie WA 6225.
Wild Geese International Combat Veterans Radio Communications Group, PO Box 73, Como WA 6152.

QLD

ACREM QLD Inc, PO Box 213, Everton Park Brisbane Qld 4053.
Alpha Whiskey, PO Box 936, Bundaberg, Qld 4670.
Australian Bulldog Club, 37 Sunderland St, Garbutt Townsville Qld 4814.
Australian International CB Social Club, PO Box 150, Inala Qld 4077.
Brisbane Volunteer Emergency Monitoring Service, 22 Reks St, Buranda Qld 4012.
Bunya Radio Club, PO Box 575, Kingaroy Qld 4610.
Color Postcard Express International QSL and Postcard Swap Club (Australian Rep), PO Box 111, Oakey Qld 4401.
Dirty Water CB Club of Australia, PO Box 262, Morningside Qld 4170.
Golden City CB Club, PO Box 557, Gympie Qld 4570.
Hervey Bay and District CB Club, PO Box 382, Pialba Qld 4655.
Inlanders CB Radio Club of Australia, PO Box 5712, Rockhampton Mail Centre Qld 4702.
Leichhardt Radio CB Club, PO Box 2386, Mt Isa Qld 4815.
Premiere Radio Social Club, PO Box 631, Sunnybank Qld 4109.
REACT QLD State Team, Box 5227, Cairns Mail Centre Nth Qld 4871.
Sunshine Coast CB Radio Club, PO Box 379, Maroochydore, Qld 4558.
Southern Cross Radio Club Inc., PO Box 529, Darra, Qld 4076.
Toowoomba District CB Club, PO Box 5387, Toowoomba Qld 4350.
Toowoomba Mountain CB Club, PO Box 5299, Toowoomba Qld 4350
Ultra Lite Radio Club Brisbane, C/- PO Box 13, Cairns Qld 4152.
Rum City CB Club PO Box 229 Qld 4670
Unicorn Radio of Australia PO Box 787 Woodridge Qld 4114.
Zodiac International DX Radio of australia, PO Box 189, Albion, Qld 4010.

CB Action Club Register

SA

ustralian Citizen Radio Monitors SA Inc (ACRM), PO Box 83, ospect SA 5082.
ustralian Independent Monitoring Service Inc, SA Division, PO ox 86, Stepney SA 5069.
hristie's Beach Citizens Band Radio Club, PO Box 22, Moana SA 169.
oonawarra CB Radio Club, 2 Eyre St, Barmera SA 5345.
ngle Radio Group, PO Box 302, Morphett Vale SA 5162.
Hate Washing Dishes, PO Box 210, McLaren Vale SA 5171.
EACT Marine Rescue Service, 1 Flavel Terrace, Murray Bridge, A 5253.
EACT SA State Team (Inc), 1 Flavel Tce, Murray Bridge SA 253.
corpion CB Radio Club, PO Box 312, Elizabeth SA 5112.
outhside CB Radio Club, PO Box 95, Glenelg SA 5045.
outh West Radio and Social Club Inc, Box 381, Morphett Vale A 5162.
rangers CB Social Club, PO Box 79, Ingle Farm SA 5098.
ans-World CB Radio Club International, 90 Crozier Ave, Daw ark SA 5041.

VIC

1 U Beaut Okker Radio Club PO Box 251 Morwell Vic 3840.
ustralian Citizens Radio Monitors Gippsland PO Box 251 Morell Vic 3840.
ustralian Radio Social Club, PO Box 222, Seaford Vic 3198.
ell Bird Club of Vic, C/- PO Box 39, St Andrews Vic ;3761.
endigo Radio CB and Social Club Inc. PO Box 862, Bendigo, Vic. 550.
ravo CB Radio Club, 11 Roxburgh Ave, Yallourn North Vic 3837.
ravo Mike Radio Club, PO Box 94, Melton Vic 3337.
ravo Sierra Bravo Radio Club (BSB), PO Box 277, Bendigo Vic 550.
ureka Base CB Radio Club PO Box 251 Morwell Vic 3840.
ippslands Emergency Monitoring Service (Inc) PO Box 983 Morell Vic 3840.
ippsland Repeater Assocn, PO Box 77, Sale Vic 3850.
rampians BC Club, C/- J. Delley, 1 Johnston St, Stawell Vic 380.
orsham CB Club, PO Box 730, Horsham Vic 3400.
ternational Crusade Assocn, PO Box 2616W, GPO Melbourne ic 3001.
ack Daniels Whisky Club PO Box 278 Preston Vic 3072.
ightowl Radio Club of Victoria, PO Box 97, Huntingdale Vic 166.
mega Radio Club of Victoria, PO Box 50, Chadstone Centre Vic 148.
adio Charity Group, Latrobe Valley, PO Box 237, Chruchill Vic 842.
adio Emergency Associated Citizens Team, 113 Blair St, Portnd Vic 3303.
adio Emergency Assoc, Citizens Teams Australia, PO Box 114 brio Vic 3214.
adio Enthusiasts Club of the Blind, PO Box 219, Glenroy Vic 046.
adio Rescue (Vic Branch), PO Box 251, Morwell, Vic. 3840.
EACT VIC State Team, 5 Damian Crt, Wodonga Vic 3690.
egion Dandenong CB Radio and Social Club, PO Box 57, Doven Vic 31277.
Riviera Radio Club of Australia, C/- P. Robertson, 19 Taylor St, Bairnsdale Vic 3875.
Royal Volunteer Coastal Patrol, PO Box 182 Brighton Vic 3186.
Ethnic Ether (Double EE) Assocn, 31 Bride St Hampton Park Vic. 3976.
Scramblers CB Radio Club of Vic. PO Box 103, Braybrook, Vic. 3019.
thern Cross Radio Group, PO Box 365, Leongatha Vic 3953.
Sovereign Radio Club, PO Box 21, Sebastapol, Ballarat Vic 3356.
Tango Victor Radio Club, PO Box 3, Timboon Vic 3268.
The Black Panther DXing Social Club PO Box 527 Bendigo Vic 3550.
Ultra-Hi Club, 8 Peter St, Bell Post Hill Vic 3215.
Victorian Scorpion Radio Club (South Gippsland), 39 Quigley St, Morwell Vic 3840.
Victoria UHF Radio Club Inc, PO Box 407 Mount Waverley Vic 3149.
28 Whiskey Group Social Club Base of vic C/- Bob, 33 Kennedy St Longwarry Vic 3816.

TAS

FIB UHF Club, PO Box 18, Ridgley Tas 7321.
REACT Tasmania State Team, RMB 7055, National Park, Tas. 7140.
Sierra Tango Radio Club, PO Box 433, New Norfolk Tas 7140.
United Frequency Operators of Tasmania, 7 Jacob Ave, Georgetown Tas 7253.

NORTHERN TERRITORY

Australian Citizen Radio Monitors, NT branch Inc, PO Box 40327, Casuarina NT 5792.
Darwin CB Radio Club PO Box 40733 Casuarina, NT 5792

INTERNATIONAL

Dayglo QSL Club, 13 Synite Place, Rostrevor, BT34-3EP, Co Down, Northern Ireland, UK.
Ethnic Ether (Double EE) Assocn, 31 Bride St Hampton Park Vic 3976
Gumboot QSL Club, PO Box 4127, New Plymouth 4630 New Zealand.
Lakeside QSL Club of Australia, 18 Malvina Pde, Gorokan NSW 2263.
REACT Australia Headquarters, 1 Flavel Tce, Murray Bridge SA 5253.
REACT International Inc, 3653 Woodhead Dve, Northbrook, Illinois USA 60062.
Three Vikings QSL Club, PO Box 34, 642 21 Katrineholm Sweden.
Wainui Radio Club, PO Box 836, Wellington NZ.

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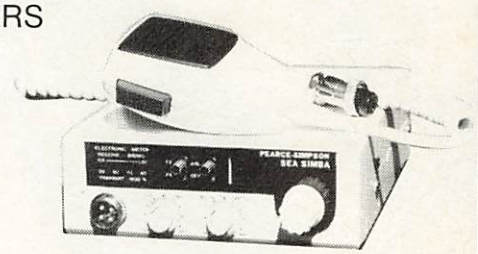

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